

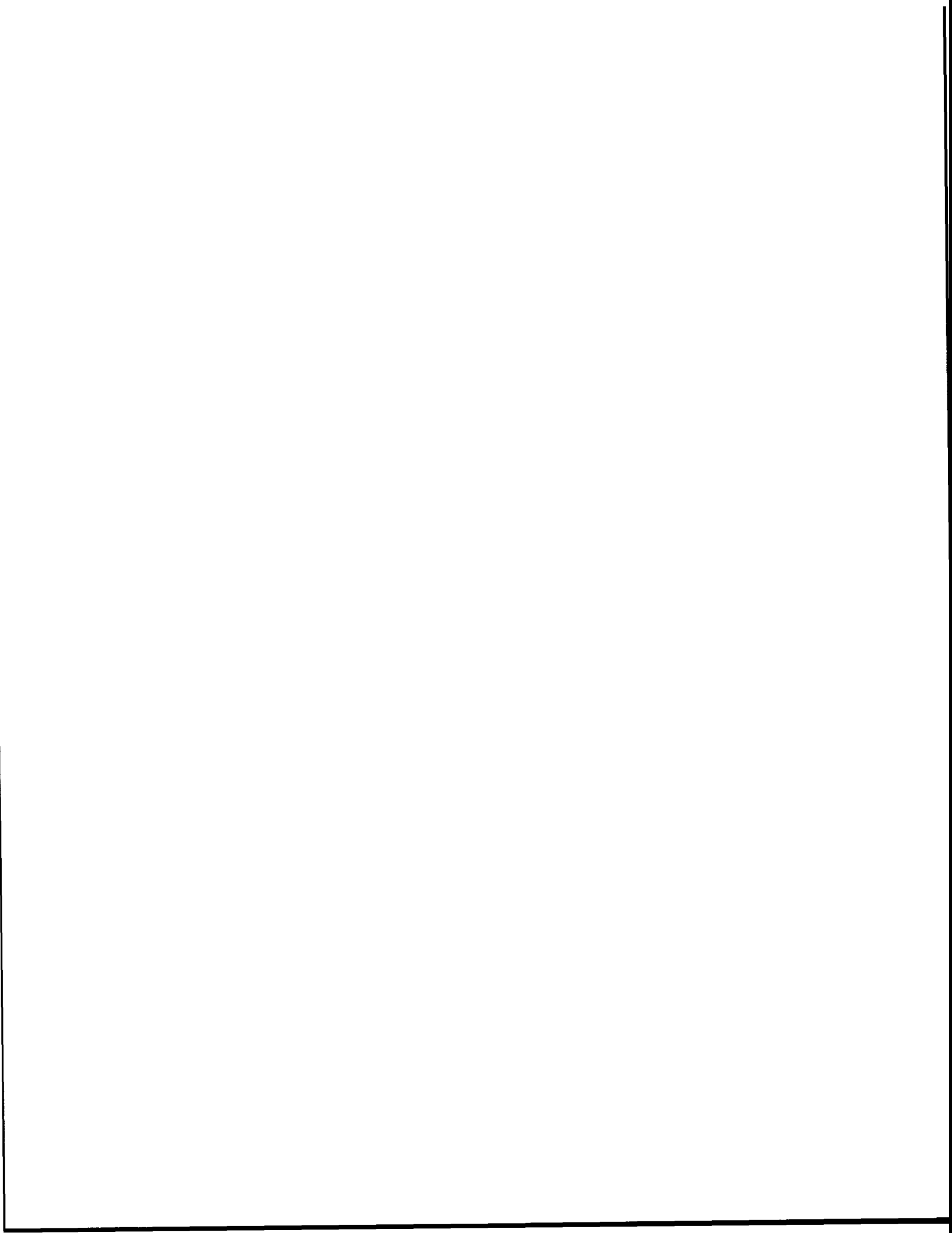
FIELD MANUAL

**AIR TRAFFIC
CONTROL FACILITY
OPERATIONS**

With 1

HEADQUARTERS, DEPARTMENT OF THE ARMY

MARCH 1976



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DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 30 September 1977

AIR TRAFFIC CONTROL FACILITY OPERATIONS

FM 1-200, 31 March 1976, is changed as follows:

1. New or changed material is indicated by a star.
2. Remove pages 100-1, 100-2, 200-3, 200-4, and 200-5; insert pages 100-1, 100-2, 200-3, 200-4, 200-5, and 200-6.
3. File this change in front of the publication for reference purposes.

By Order of the Secretary of the Army:

BERNARD W. ROGERS
General, United States Army
Chief of Staff

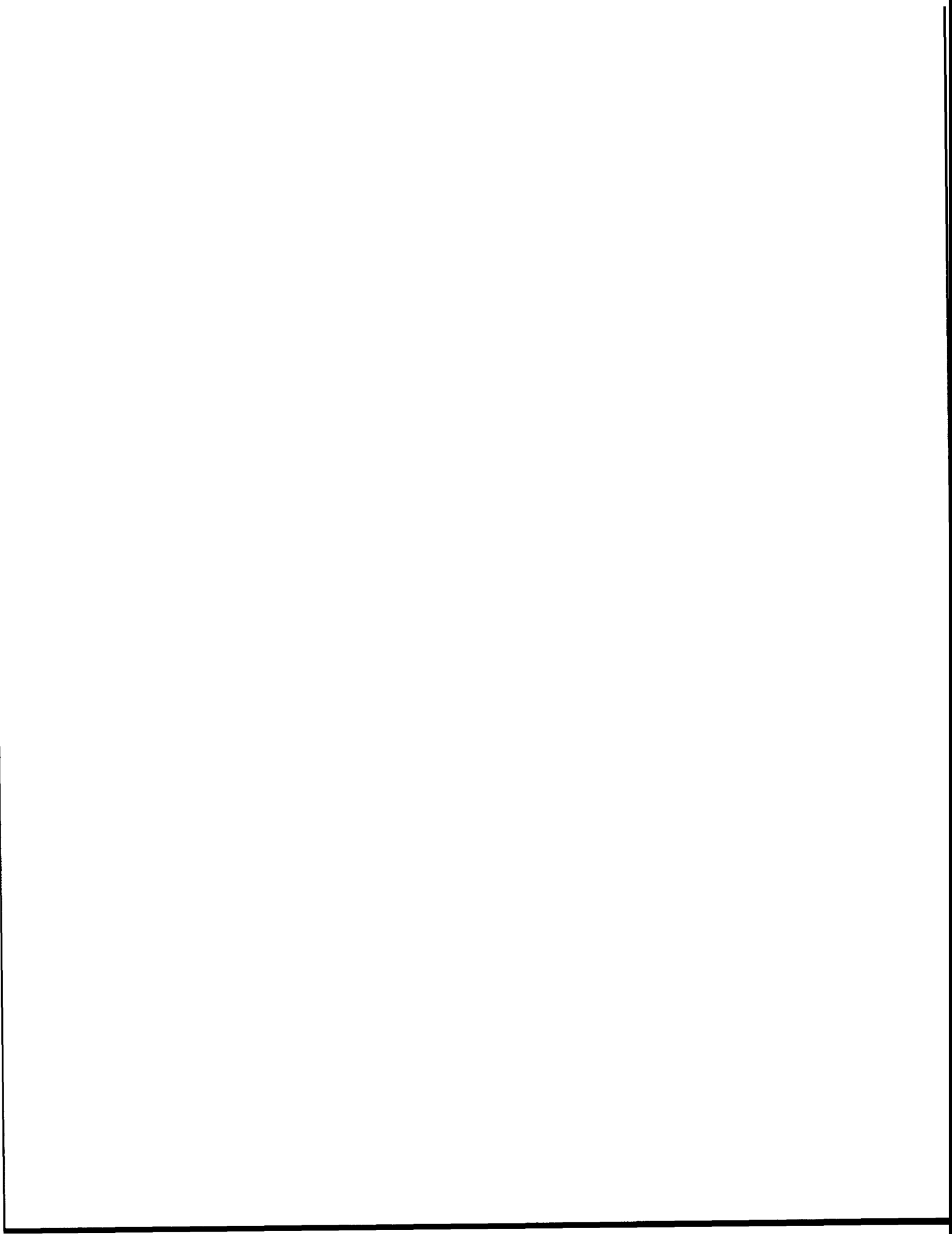
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AIR TRAFFIC CONTROL FACILITY OPERATIONS

		Page
SECTION	100. GENERAL	
	110 Application	100-1
	111 Purpose	100-1
	112 Scope	100-1
	120 Use of the Manual	100-1
	121 Word Usage	100-1
	122 Explanation of Terms	100-1
	123 Changes to the Manual	100-1
	130 Classification of Facilities	100-2
	131 Classification of Terminal Facilities	100-2
SECTION	200. RESPONSIBILITIES AND STANDARDS	
	210 General	200-1
	211 Scope	200-1
	220 Responsibilities	200-1
	221 Position Titles and Responsibilities	200-1
	230 Standards	200-2
	231 Certification and Rating	200-2
	232 Assignment of Operating Positions	200-2
	233 Hours of Duty	200-2
	234 Currency Requirements	200-3
	235 Special Medical Considerations/Use of Drugs, Sedatives, and Intoxicants	200-4
	236 Performance of Non-ATC Duties	200-4
	237 Noncontroller Personnel in ATC Facilities	200-4
	240 Facility Hours of Operation	200-4
	241 Hours of Operation	200-4
	242 Facility Manning	200-4
	243 Emergency Manning Level (EML)	200-4
	244 Minimum Shift Requirements	200-5
	245 Reporting EML Conditions	200-5
SECTION	300. FACILITY ADMINISTRATION	
	310 General	300-1
	311 Facility and Personnel Appearance	300-1
	312 Duty Schedules	300-1
	313 Operating Initials	300-1
	314 Time Standards	300-1
	315 Area of Nonvisibility from Control Towers	300-1
	316 Intersection Takeoffs	300-1
	317 Security Control Air Traffic and Air Navigation Aids (SCATANA) Procedures (United States, Territories, and Possessions Only).	300-1
	318 Flight Progress Strips	300-1
	319 Air Traffic Activity	300-1
	320 Reference Material and Miscellaneous Instructions	300-2
	321 General	300-2
	322 Charts and Maps	300-2
	323 Facility Training	300-2
	324 Basic Reference Files	300-2
	325 Controller Reference File	300-2
	326 Recent Information File	300-3
	330 Letters of Agreement, Operations Letters, and Facility Memoranda	300-3
	331 General	300-3
	332 Letters of Agreement	300-3
	333 Operations Letters	300-4

	Page
334 Facility Memoranda	300-5
340 Facility Operating Forms	300-5
341 General	300-5
342 DA Form 3501-R (Radar Operations Log)	300-5
343 DA Form 3502-R (Daily Report of Air Traffic Controller)	300-6
344 DA Form 3503-R (Air Traffic Control Position Log)	300-9
350 Handling Aircraft Accidents and Incidents	300-11
351 General	300-11
352 Responsibilities	300-11
353 Accidents/Incidents Involving Radar Facilities	300-11
354 Retention of Accident/Incident Records	300-11
355 Reports	300-11
360 Release of Information	300-11
361 Policy and Responsibility	300-11
362 Removal of Original Records	300-12
363 Transcription Preparation and Handling	300-12
364 Certified Copies of Records	300-12
370 Weather Observations	300-13
371 Cooperative Weather Reporting	300-13
372 Relay of Observations	300-13
373 Use and Display of Weather Data	300-13
374 Posting Weather Data	300-13
375 Estimated Altimeter Settings	300-13
SECTION	
400. FACILITY EQUIPMENT AND OPERATING PROCEDURES	
410 General	400-1
411 Equipment Layout	400-1
412 Standards	400-1
413 Emergency Lighting in Facilities	400-1
414 Facility Clocks	400-1
415 Equipment Checks	400-1
416 Calibration of Altimeter Setting Indicators and Aircraft Altimeters	400-1
417 Radar/NAVAIDS Emergency Warning and Evacuation Alarms	400-1
418 Magnetizing of Indicators	400-1
420 Towers and Nonradar Approach Control	400-2
421 Tower Equipment	400-2
422 Flight Data	400-2
423 Approach Control Equipment (Nonradar)	400-2
424 Arrangement of Postings—Nonradar Approach Control	400-2
425 Postings—Nonradar Approach Control	400-2
430 Radar	400-3
431 General	400-3
432 Radar Mapping Requirements	400-3
433 Radar Beacon (IFF/SIF)	400-3
434 Airport Surveillance Radar (ASR)	400-4
435 Terminal Radar Equipment	400-4
436 Posting Flight Progress Strips—Radar Approach Control	400-4
437 Handling Flight Data	400-4
440 Recorders	400-4
441 General	400-4
442 Recorder Use	400-4
443 Handling of Recorder Tapes	400-5
444 Checking Recorder Operation	400-5
445 Storage and Retention	400-5
446 Custodial Control	400-5
450 Radio and Landline Communications Operation	400-6
451 Responsibility	400-6
452 Authorized Messages Not Directly Associated with Air Traffic Control	400-6
453 Landline Communications	400-6
454 Radio Operation	400-6
455 Emergency Frequencies 121.5 MHz and 243.0 MHz	400-6
460 Interruptions to Navigational Aids, Communications, and Radar Equipment	400-7
461 Maintenance Shutdown Policy	400-7
462 Monitoring Navigational Aid Equipment	400-7
463 Reporting Interruptions and Malfunctions	400-7
464 Notices to Airmen (NOTAM)	400-7
465 Use of Backup Power Generators	400-7
470 Operation of Airfield Light Systems and Visual Aids	400-7

	Page
471 General Airfield Lighting	400-7
472 Wind Direction Indicator	400-8
SECTION	
500. ATC FACILITY TRAINING PROGRAM	
510 Purpose	500-1
520 Scope	500-1
521 Qualification Training	500-1
522 Proficiency Training	500-1
523 Remedial Training	500-1
530 Responsibilities	500-1
531 ATC Chief/Facility Chief	500-1
532 ATC Training Supervisor	500-1
540 The Facility Training Program (FTP)	500-1
541 Indoctrination Phase	500-1
542 Primary Knowledge Phase	500-1
543 Controller Position Training Phase	500-1
544 Position Qualification Phase	500-2
545 Facility Rating	500-2
546 Time Limitations	500-2
550 Facility Training Records and Forms	500-2
551 General	500-2
552 DA Form 3479-R, Air Traffic Control Training and Proficiency Record	500-2
553 DA Form 3479-1-R, Controller Evaluation	500-11
554 DA Form 3479-2-R, Progress and Certification Record and Control Tower	500-14
555 DA Form 3479-3-R, Progress and Certification Record for Terminal Radar	500-14
560 Maintenance of Controller Training/Proficiency Record Files	500-14
561 Systems Managers	500-14
562 Preparation and Maintenance DA Form 3479-R	500-14
563 Access	500-44
564 Contest	500-44
565 Transport of Records	500-44
566 Retention	500-44
570 Preparation of the Facility Training Manual (FTM)	500-44
571 General	500-44
572 Format and Subject Content for the FTM	500-44
APPENDIX	
A. REFERENCES	A-1
B. FACILITY REFERENCES	B-1

SECTION 100

GENERAL

110. Application*111. Purpose.*

111.1 This manual provides administrative and operational standards for the operation of US Army air traffic control facilities.

112. Scope.

112.1 This manual is supplemental to Federal Aviation Administration (FAA) Handbook 7110.65 which prescribes the separation minima and procedures to be used in providing air traffic control services. These minima and procedures apply except—

a. When the US Army is providing air traffic control (ATC) service for or in overseas areas and deviations are necessary to conform with foreign government regulations and these deviations are outlined in an agreement between the theater commander and the host government concerned.

b. When tactical deployment of air traffic control services or facilities at other than permanently established airfields necessitate deviation.

120. Use of the Manual*121. Word usage.*

121.1 As used in this manual, except when context requires otherwise—

a. "Shall," or an action verb in the imperative sense, means a procedure is mandatory.

b. "Should," means a procedure is recommended.

c. "May," or "need not," means a procedure is optional.

d. "Will," means futurity, not a requirement for application of a procedure.

e. Singular words include the plural.

f. Plural words include the singular.

g. "Aircraft," means the airframe, crew members, or both.

122. Explanation of terms.

122.1 As used in this manual, the following terms have the meanings indicated:

a. *Airport surveillance radar (ASR).* Radar displaying range and azimuth which is normally employed in a terminal area as an aid to approach and departure control.

b. *Approach clearance.* Authorization for a pilot to commence an approach to an airport.

c. *Army radar approach control (ARAC).* A facility providing radar approach control service through use of airport surveillance radar (ASR) and/or precision approach radar (PAR).

d. *Controller.* For the purpose of this manual, controller means air traffic control specialist; a duly

authorized person providing air traffic control service.

e. *Facility.* An air traffic control facility, including personnel, equipment, and structures, that provide air traffic control service; i.e., control tower, approach control, or ground control approach (GCA).

f. *Facility rating.* Official verification that an air traffic controller has demonstrated to a designated ATC examiner the proficiency and skill requirements stated in Federal Aviation Regulation (FAR), Part 65, and this manual.

g. *Facility Training Manual (FTM).* A locally developed publication used as a training manual in the Facility Training Program (FTP) as well as a ready reference in the facility.

h. *Facility Training Program (FTP).* An Army air traffic control facility training program designed to develop and maintain the proficiency and skills necessary to perform air traffic control duties.

i. *Ground controlled approach (GCA).* The technique or procedure for "talking down," through the use of both surveillance and precision approach radar (PAR), an aircraft during its approach so as to place it in a position for landing.

j. *Joint facility.* An air traffic control facility wherein the division of operational responsibility is clearly defined between the Army and another agency.

k. *Minimum vectoring altitude.* The lowest altitude expressed in feet above mean sea level (MSL) that aircraft will be vectored by a radar controller. This altitude assures communication, radar coverage, and meets obstruction clearance criteria.

l. *Precision approach radar (PAR).* Ground based radar which furnishes range, azimuth, and elevation data for the purpose of providing final approach service to landing aircraft.

m. *Standby Equipment.* Standby and/or dual channel radar, NAVAID, or ATC communications equipment capable of providing the identical service of the primary equipment and spot-checked to assure it is functioning in a manner equal to the primary equipment. (See TM 11-2557-25 (TM 95-225).)

123. Changes to the manual.

123.1 Users of this manual are encouraged to submit recommended changes and comments to improve the publication. Comments should be keyed to specific page, paragraph, and line of the text in which the change is recommended. Reasons will be provided for each comment to insure understanding and complete evaluation. Comments should be pre-

pared using DA Form 2028 (Recommended Changes to Publications) and forwarded directly to Commander, US Army Air Traffic Control Activity (USAATCA), ATTN: CCQ-OM-OP, Ft Huachuca, AZ 85613.

130. Classification of Facilities

131. Classification of terminal facilities.

131.1 Air traffic control facilities within the US Army are grouped into the following major classifications:

a. Airfield/heliport traffic control tower.

b. Terminal radar facilities.

131.2 When a GCA facility does not provide continuous service, it will be classified as one of the following:

a. *Standby operation.* The preheats are left on and the radar unit is ready for operation within 15 minutes.

b. *On call operation.* Radar unit is completely shut down. Radar service can be provided on 1-hour notice.

SECTION 200

RESPONSIBILITIES AND STANDARDS

210. General

211. Scope.

211.1 The responsibilities and standards outlined herein are mandatory requirements. A local ATC facility Standing Operating Procedure (SOP) may be used to supplement these requirements when necessary.

211.2 Each facility is under the direct supervision of a Facility Chief who is responsible for the efficient administration and operation of the facility.

211.3 Operating positions shall be manned and functions performed only by ATC personnel qualified to perform duties as outlined herein.

211.4 Facility Chief may permit consolidation of operating positions and the performance of more than one function by a controller.

220. Responsibilities

221. Position titles and responsibilities.

221.1 Supervisory/administrative categories.

a. ATC Chief. Responsible for the supervision and management of all air traffic control facilities (two or more) located at an airfield/heliport.

b. Facility Chief. Responsible for the administration, duty schedules, and operation within an air traffic control facility (i.e., tower, approach control or GCA) at an airfield/heliport.

c. Training supervisor. Appointed by the ATC Chief/Facility Chief and responsible for conducting all facility training to include qualification, proficiency, and remedial training and maintaining all facility training records prescribed herein.

d. Shift supervisor. Responsible to the Facility Chief for the efficient operation of the facility during his tour of duty. Specifically responsible for assigning and directing subordinates on that shift in all phases of their work, giving on-the-job training to trainee controllers and assisting the training supervisor in the facility training program for controllers, giving assistance and advice in emergencies, maintaining facility records, preparing reports of activities conducted during the shift, and delegating responsibility to subordinates as necessary.

e. Crew chief. Responsible for supervision of an assigned group or "team" of controllers and for coordinating activities between positions within the facility and with other facility locations.

221.2 Controller position categories.

a. Crew chief (Position CR) (ARAC). Provides administrative and technical supervision of a group of controllers and performs coordinator or other duties as assigned.

b. Shift supervisor (Positions WC) (Tower). Supervises all phases of work on a shift in the tower facility.

c. Shift supervisor (Position WA) (ARAC). Supervises all phases of work on a shift in a terminal radar facility.

d. Local control (Position LC). Issues information and clearances to aircraft operating on the landing area, to VFR traffic operating in the control zone or airport traffic area, and to instrument flight rules (IFR) traffic released to local control jurisdiction.

e. Ground control (Position GC). Issues information and clearances to taxiing aircraft and vehicular traffic on the airfield/heliport.

f. Ground radar (Position GR). Employs airport surface detection radar equipment (ASDE) to provide ground control (GC) functions.

g. Approach control (Position AC). Provides separation between all aircraft operating IFR within the designated area of jurisdiction through application of nonradar standards.

h. Arrival control (Position AR) (Radar). Expedites the movement of arriving aircraft through the use of radar equipment, providing radar separation from other aircraft. Also provides radar traffic advisory service to VFR aircraft when workload permits.

i. Precision approach radar (Position PAR). Operates precision radar equipment to assist pilots to approach the runway and monitors instrument approaches.

j. Departure control (Position DC). Provides separation between aircraft operating IFR departing from a terminal area through the application of nonradar standards.

k. Departure control (Position DR) (Radar). Provides departure control (DC) service and expedites the movement of departing aircraft by providing radar separation between successive departures and between departing and arriving aircraft. Also provides radar traffic advisory service to VFR aircraft when workload permits.

l. VFR radar arrival advisory (Position AA). Provides radar traffic advisory service to arriving

VFR traffic along designated arrival routes and in the vicinity of a terminal.

m. VFR radar departure advisory (Position DA). Provides radar traffic advisory service to departing VFR traffic along designated departure routes and in the vicinity of a terminal.

221.3 Controller support category.

a. Flight data (position FD). Receives, posts, and relays flight data and assists in the operation of the facility as directed.

b. Clearance delivery (Position CD). Delivers IFR clearances to departing aircraft. When this position is activated, these functions are then separate from the ground control or flight data positions.

c. Flight data (Position AD) (Radar). Copies and relays clearances and messages and maintains records as directed.

221.4 Controller. Responsible for formulating and issuing clearances and control instructions to provide appropriate separation between aircraft operating under the jurisdiction of the facility, effecting coordination with appropriate positions of operation and other facilities, providing flight assistance service to aircraft as required, assisting in search and rescue activities as required, and reporting aircraft accidents and deviations from established regulations and practices.

221.5 Assistant controller. Responsible for assisting controllers in the control of air traffic, receiving and relaying flight data, calculating and posting flight data on flight progress strips, and other duties as directed.

230. Standards

231. Certification and rating.

231.1 Military and civilian personnel performing administrative, supervisory, or operational air traffic control duties in an ATC facility shall be certified and rated IAW AR 95-37 and remain current as specified herein.

231.2 Air traffic controllers performing control tower duties shall be certified to make limited weather observations at duties shall be certified to make limited weather observations at the AAF/AHP to which assigned, prior to being facility rated. It will be the responsibility of the ATC Chief/Facility Chief, or other appropriate authority, to coordinate with the commander of the nearest USAF Air Weather Service (AWS) facility to establish a program for training and certifying Army air traffic controllers to make limited weather observations. These observations will include only the information taken directly from instruments (wind direction, wind velocity, and altimeter) and visibility observed using an approved visibility checkpoint chart. Under combat conditions, request training and certification

from the USAF staff agency responsible for providing weather support. Each tower controller will successfully complete certification for limited weather observation upon assignment to a control tower facility. The facility chief shall conduct a reevaluation of this certification annually by including it in one of the semi-annual controller evaluations. The results of this "certification" will be entered in section V, DA Form 3479-R initially as "qualification" training and as "proficiency" training thereafter.

232. Assignment of operating positions.

232.1 Controllers shall be assigned to positions of operations as required by traffic conditions, equipment, and individual qualifications. During periods of limited activity, positions may be consolidated in consonance with facility activity and the qualifications of the controllers involved.

232.2 Only position qualified/facility rated personnel shall be assigned to control positions. Position qualified personnel shall be assigned only to positions for which they are position qualified. Trainees may work in a control position only when under the direct supervision of the facility rated controller assigned to that position. When PAR approaches are being conducted by a trainee, the aviator shall be notified as soon as possible after initial contact that controller training is in progress.

232.3 Trainees may, at the discretion of the shift supervisor, be assigned to or permitted to work, under direct supervision, at precision final controller position or surveillance final controller position when the weather conditions are below visual flight rules (VFR), but are not less than 500 feet and/or visibility 1 mile and the supervising controller has direct communications over-ride for that control position.

232.4 During facility rating examinations, the training supervisor or the controller assigned to the position is responsible for the control of air traffic. This responsibility may be assumed by the examiner, provided he concurs and is qualified to control air traffic at that facility.

233. Hours of duty.

233.1 Personnel involved in the control of air traffic or the direct supervision of personnel performing these functions shall be scheduled for duty as follows:

a. An 8-hour shift is standard; however, not more than 10 consecutive hours may be worked at any one time.

b. A 40-hour week is standard; however, a 60-hour week may be authorized for a period not to exceed 30 days.

c. A 16-hour rest period between shifts is stan-

dard, and an 8-hour rest period is minimum. Not less than one 24-hour rest period will be scheduled during each 7 consecutive days.

d. A 15-minute rest period will be required during each 4 hours of continuous work, provided traffic density and facility operations permit.

233.2 The standard daily (8-hr) or weekly (40-hr) shift in the ATC facility shall be exceeded only when direct-ATC services are required.

233.3 Prior to committing a DAC ATC specialist to overtime, pre-action coordination shall be accomplished with the local Civilian Personnel Office if required.

234. Currency requirements.

234.1 All Army air traffic controllers, except ATC Chiefs shall be current in the ATC facility to which assigned.

234.2 To be current in a position, a controller shall have satisfied the following conditions:

a. Towers.

(1) Satisfactory performance of duties, associated with the rating held, for at least 8 hours during each 30 calendar days.

(2) Serve at least 3 of the preceding 6 months as an air traffic control tower operator at the control tower to which his facility rating applies, or at the operating position(s) for which he has qualified; or the controller has shown that he meets the requirements for his certificate and facility rating at the control tower concerned, or for operating positions for which he has previously qualified.

(3) Reinstatement of a tower operator who has not remained current shall be accomplished by satisfactory demonstration, under direct supervision, of performance of the required control tower operator duties. This competency demonstration shall be of at least 8 hours duration, consecutive or cumulative, and accomplished during a period of 3 days.

b. ARAC.

(1) Satisfactory performance of the duties, associated with the rating held for at least 8 hours during each 30 calendar days.

(2) Conduct 10 radar approaches each 30 calendar days; if PAR equipment is installed and the controller is PAR rated, an additional 10 PAR approaches per 30 calendar days shall be required.

(3) Complete at least five "no-gyro" or practice emergency approaches each 30 calendar days. This requirement may be included in the total number of approaches in (2) above.

(4) Reinstatement of a controller who has not remained current may be accomplished by the following actions:

(a) By fulfilling the requirements of (1), (2), and (3) above if the nonqualified status does not exceed three consecutive calendar months.

(b) By satisfactorily performing the appropriate radar duties a total of 20 hours under direct supervision if the nonqualified status exceeds three consecutive calendar months. During this 20 hours of radar duty, at least ten radar approaches, if appropriate, shall be satisfactorily demonstrated.

c. GCA.

(1) Complete 20 approaches or 15 approaches and 15 simulated approaches each 30 calendar days.

(2) Complete at least five "no-gyro" or practice emergency approaches each 30 calendar days. This requirement may be included in the total number of approaches in (1) above.

(3) When a facility rated GCA controller is signed on the DA Form 3503-R (Air Traffic Control Position Log) with a trainee, all GCA approaches made will be counted on the trainee's DA Form 3479-R, section VIII. The rated controller may count the approaches made toward his/her monthly currency requirements when the following conditions are met:

(a) The trainee has not made more than 50 of his initial qualifying runs.

(b) The number of monitored approaches counted for monthly currency may not exceed 10 per month.

(4) Reinstatement of a GCA controller who has not maintained currency shall be accomplished by requiring the controller to perform 20 supervised GCA approaches within a 30-day period at which time he shall demonstrate his proficiency in all aspects of the GCA rating examination to an ATC examiner or the training supervisor, if an ATC examiner is not available.

234.3 Sufficient time and equipment shall be made available to enable GCA controllers to meet operational and proficiency requirements. If necessary, special training flights shall be scheduled to insure that these requirements are satisfied. In those cases where an installation or airfield commander cannot provide sufficient training flights to support air traffic controller proficiency, it is the responsibility of the ATC Chief/Facility Chief to notify the immediate USACC agency/detachment commander. The USACC agency/detachment commander will, under the provision of AR 95-37, request major command to provide training flights from other military installations.

234.4 All currency checks shall be entered in section VII of the GCA controller's training record, DA Form 3479-R. If a controller does not maintain currency, this will be noted in section III, and that controller may work only under direct supervision of a current, rated GCA controller until he/she has regained currency.

234.5 If the controllers in a radar facility can-

not maintain currency due to insufficient air traffic, the airfield commander shall be advised in writing that a NOTAM should be issued stating the radar facility is for "training purposes only" until sufficient controllers obtain currency necessary to meet emergency manning level (EML) for that facility.

235. Special medical considerations/use of drugs, sedatives, and intoxicants.

235.1 Personnel involved in the control of air traffic, or the direct supervision of these functions, shall not use the following medications within a 24-hour period preceding the assumption of duty:

- a. Sedative and sleep inducing drugs.
- b. Tranquilizers.
- c. Antihistamines. (Waiver of this requirement may be granted by a qualified medical officer/flight surgeon after it has been determined to his satisfaction that there are no deleterious effects from the antihistamine or the condition for which it is being used.)
- d. Any medications such as, but not limited to, medications to control blood pressure, peptic ulcer, or which have an effect on the nervous system.
- e. Any other drug and/or medication likely to affect the alertness, judgment, vision, equilibrium, or state of consciousness.

235.2 Personnel who have been absent from duty because of illness, or who have consulted a physician for any reason related to their health, shall not perform or directly supervise ATC functions until cleared for such duty by a qualified medical officer/flight surgeon.

235.3 Personnel shall not perform or directly supervise ATC functions following immunizations until local or general reactions have subsided and the controller is cleared for such duty by a qualified medical officer/flight surgeon.

235.4 Personnel shall not perform or directly supervise ATC functions for at least 12 hours following a blood donation.

235.5 Personnel shall not perform or directly supervise ATC functions within 8 hours after the partaking of intoxicants.

235.6 Any interviews concerning a controller's physical well being shall be entered in section III, interview data, DA Form 3479-R, with comments on action taken. Additional comments may be made in section IX, miscellaneous general comments, DA Form 3479-R.

236. Performance of non-ATC duties.

236.1 Air traffic controllers shall not be required to perform duties within the facility which do not involve the control of air traffic or to perform non-MOS related duties outside the facility except through an operations letter between the USACC agency/detachment commander or other appropri-

ate authority and the host post, camp, or station commander. This operations letter shall specify that all such duties shall be curtailed during periods when manning for that facility is below authorized tables of distribution and allowances (TDA) manning level.

237. Noncontroller personnel in ATC facilities.

237.1 The number of noncontroller personnel in air traffic control facilities shall be kept to a minimum. The ATC Chief/Facility Chief or, in his absence, the shift supervisor on duty shall be the final authority on the number of noncontroller personnel permitted in the facility at any one time.

240. Facility Hours of Operation

241. Hours of operation.

241.1 The post, camp, or station commander shall determine hours of operation of the ATF facility.

241.2 When a facility does not operate 24 hours a day, the actual hours of operation shall be published in appropriate flight information publications.

242. Facility manning.

242.1 Facility manning shall be determined by air traffic density, hours of operation, and number of controller positions (defined in 221.2 above) necessary to meet operational requirements.

242.2 Only air traffic controllers who are position qualified or facility rated will be assigned to operating positions without supervision. A minimum of one facility rated controller shall be assigned to each shift, and other controllers shall only be assigned duties at control positions for which they are qualified.

★242.3 At locations providing terminal ATC service, fully qualified ATC radar, NAVAID, and communications repairmen shall be available on the airfield/heliport during normal duty hours; e.g., 0730-1615, Monday through Friday.

★242.4 During other than normal duty hours, when weather conditions are, or forecast to be, at or below VFR minimums and terminal radar service is anticipated; e.g., inbound aircraft, aviator has requested on flight plan, etc, a fully qualified ATC radar repairman shall be available as indicated below.

a. At those radar facilities equipped with standby equipment or where other approved instrument approaches; e.g., VOR, ILS, etc; to the airfield/heliport are available and operational, the USACC agency/detachment commander shall prepare written procedures regarding standby or on-call procedures for off-duty radar maintenance personnel.

b. If a terminal radar system which is not equipped with standby equipment provides the only

approved instrument approach to the airfield/heliport, a qualified ATC radar repairman shall be on duty at the airfield/heliport.

c. Where a terminal radar system equipped with standby equipment provides the only approved instrument approach to the airfield/heliport, ATC radar maintenance will be available as directed by the USACC agency/detachment commander. Such direction shall be set forth in written procedures.

★242.5 During other than normal duty hours, the USACC agency/detachment commander shall establish written procedures to ensure qualified radio and NAVAID maintenance personnel are prepared to respond expeditiously to malfunctions of NAVAID or communications equipment.

243. *Emergency manning level (EML).*

243.1 USACC agency/detachment commanders shall formulate proposed EML for ATC facilities. EML shall be forwarded to Commander, USAATCA, ATTN: CCQ-OM-OP, Ft Huachuca, AZ, for validation prior to implementation.

243.2 Facilities will be considered to be operating under an emergency manning level (EML) when either of the following conditions exist:

a. Standard hours of duty outlined in 233.1 above cannot be maintained.

b. Insufficient number of facility rated controllers assigned to man the control positions necessary to meet operational requirements.

243.3 Computation of facility EML. To compute total complement of qualified controllers required for a facility under EML conditions: Apply the extended normal workweek available man-hour rate (240 hours per month). Multiply the approved ATC positions on the facility TDA manning, less the Facility Chief by the ATC normal workweek available man-hour rate (160 hours per month), (para 233). Divide the total by the extended normal workweek available man-hour rate to determine the manning required for an extended normal workweek; for example:

EML for a control tower with an authorized TDA of 13, including Facility Chief, would be as follows:

$$12 \times 160 = 1920 \div 240 = 8$$

Note 1. Total facility TDA authorizations may be used when computing EML for those facilities authorized five controllers or less.

Note 2. Extended normal workweek is based on a six-day week, 10 hours per day, 60 hours per week.

Note 3. All facility EML computations shall be rounded up to the next higher number.

243.4 ATC facilities may be operated under an emergency manning level (EML) situation for a period not to exceed 30 days. If assigned and attached qualified controller strength is not increased sufficiently during this period, a further reduction

of functions and a reduction in the hours of operation will be accomplished.

244. *Minimum shift requirements.*

244.1 Shift duty schedules and actual shift manning, normally will provide for no fewer qualified controllers than provided for each shift by application of the manpower standard based on approved TDA. This does not preclude reducing the actual shift manning for periods when it is definitely known that the flying activity will be less than normal day-to-day activities; i.e., holidays and weekends.

244.2 The minimum number of personnel scheduled and present for duty shall not be less than the following:

a. Control tower: One facility rated and one position qualified controller.

b. Approach control tower (non-radar): One facility rated and one position qualified controller for tower function, in addition to one facility rated and one position qualified controller for nonradar approach control function.

c. GCA: One facility rated and one position qualified controller.

d. ARAC with PAR: One facility rated and one position qualified controller for each radar approach control function, including the PAR function.

e. Other (i.e., flight following, range control, etc.), as determined locally.

245. *Reporting EML conditions.* At the earliest date it is foreseen that facility manning will be at EML for more than 30 days, or will go below EML, USACC agency/detachment commander shall notify, through channels, Commander, USAATCA, ATTN: CCQ-OM-OP, Ft. Huachuca, AZ, prior to advising post authorities.

245.1 Report format:

a. Notification is made by message in the following format:

(1) Title. EML Report

(2) Facility and location

(3) Services/hours to be curtailed if EML extends for more than 30 days.

(4) Expected implementation date of curtailment.

(5) Specific reasons for the proposed curtailment.

(6) Proposed hours of operation and/or services remaining.

(7) Estimated date normal hours/services should be resumed.

b. If it is determined that corrective action cannot be taken in time to avoid a curtailment, the USACC agency/detachment commander shall notify the post, camp, or station commander of the an-

SECTION 300

FACILITY ADMINISTRATION

310. General

311. Facility and personnel appearance.

311.1 The appearance of each ATC facility shall reflect the high standards of the US Army at all times. The ATC Chief/Facility Chief shall publish a facility memorandum outlining areas of responsibility and housekeeping requirements.

311.2 Personnel shall maintain a professional appearance at all times.

312. Duty schedules.

312.1 Facility Chiefs are responsible for developing, maintaining, and posting a current facility duty schedule.

312.2 Schedules shall be arranged to provide a 15-minute overlap of shifts for the purpose of providing a briefing prior to assuming ATC duties. This time is not considered duty time when computing duty hours in para 233.

313. Operating initials.

313.1 Controllers shall be assigned individual two-letter operating initials for use when the identity of the controller is necessary for record purposes. ATC Chief/Facility Chief shall assign and maintain a listing of individual two-letter operating initials for assigned controllers; discretion shall be exercised by avoiding initials that tend to confuse (e.g., OK, NO).

313.2 Except where signatures are required, operating initials shall be used on all operating forms, radio, and interphone lines, flight data records, marking of recorder loops and tapes, and for other record purposes.

314. Time standards.

314.1 All ATC facilities shall utilize Greenwich Mean Time (GMT) on a 24-hour basis for entries on all forms, logs, and written records and in radio and landline communications. Local time shall be used for facility duty schedules, daily traffic counts, and other administrative forms and correspondence.

315. Area of nonvisibility from control towers.

315.1 Where portions of the airfield surface or traffic pattern are not visible from the tower, supervisory personnel of the airfield and tower should collaborate, as required, to disseminate this information locally. ATC Chiefs/Facility Chiefs shall continually review published information about this subject and revise it as necessary. Recommended wording for notices is as follows: "Not

visible from tower, use of this area is at pilot's discretion."

316. Intersection takeoffs.

316.1 Facility Chiefs at control towers shall prepare an airfield diagram showing intersection takeoff information as follows:

a. Indicate the remaining runway length from each intersection. Obtain measurements from an authentic source and record them on the diagram in hundreds of feet, using two digits; e.g., 4,000 feet = 40.

b. If certain intersection takeoffs are denied, this shall be on the diagram.

Example: / _____ NO TKOF _____ /

c. Indicate any access points to a runway from which a pilot may request an intersection takeoff.

317. Security control of air traffic and air navigation aids (SCATANA) procedures (United States, territories, and possessions only).

317.1 Procedures for implementation of SCATANA (AR 95-21) shall be established for each operating position in all air traffic control facilities. This information will be kept in the FTM, chapter VIII, and each controller briefed on the location and contents. SCATANA briefings shall be given each controller quarterly by the training supervisor and this information entered on each individual's training record in section V, DA Form 3479-R, under "proficiency" training.

318. Flight progress strips.

318.1 Flight progress strips shall be used as outlined in FAA Handbook 7110.65.

318.2 Flight progress strips shall be requisitioned from USAATCA Aeronautical Services Office (ASO) or the appropriate Aeronautical Services Detachment (ASD) as outlined in AR 95-14.

318.3 Flight progress strips shall be filed daily and retained for 15 days.

319. Air traffic activity.

319.1 The ATC Chief/Facility Chief is responsible for the air traffic activity count in accordance with AR 95-24.

319.2 The VFR air traffic activity count will be determined utilizing the mechanical counters listed in section 400. The IFR air traffic activity count will be determined from flight progress strips.

319.3 The shift supervisor on duty at 2400 hours or at the close of the facility shall enter daily totals

(obtained in para 319.2 above) on DA Form 1968-R.

319.4 The Facility Chief shall tally the total activity count on a monthly basis. These monthly totals shall be used to complete DA Form 1968-1-R. (IAW AR 95-24)

319.5 The following guidelines are used to determine under which category an aircraft may be counted:

a. Aircraft operating in formation are considered a single aircraft unless the formation breaks up into smaller formations or individual flights prior to entering the traffic pattern, or passing the final approach fix when conducting an approach, or crossing the airfield boundary when departing.

b. Military aircraft of a foreign government should be tabulated under "Military" on DA Form 1968-R.

c. Vectors to arriving, departing, or transiting aircraft may be tabulated. These vectors shall not be used to meet controller training or proficiency requirements contained in this manual. An ASR or PAR count is not taken unless the aircraft has commenced final approach, is under the control and executing the instructions of the controller, and has passed the final approach fix inbound to the airfield.

d. Aircraft operating under special VFR are considered as an IFR operation.

e. Aircraft executing simulated instrument and/or terminal radar approaches are counted as VFR operations unless IFR separation is provided IAW FAA Handbook 7110.65.

f. When the provisions of e above are met and the aircraft executes a low approach or touch-and-go landing, two IFR operations are counted.

319.6 Accurate air traffic activity counts are essential since they have a direct impact on—

a. NAVAID authorizations.

b. ATC facility manning.

c. Airfield/heliport aviation facilities.

319.7 Traffic count information shall be made available to the appropriate FAA air route traffic control center (ARTCC) when requested by the center's chief controller.

320. Reference Material and Miscellaneous Instructions

321. General.

321.1 ATC Chiefs/Facility Chiefs shall be responsible for establishing and maintaining complete, current sets of maps, charts, reference files, and other documents required for proper and efficient conduct of facility operations.

321.2 Reference files shall be arranged in looseleaf binders, labeled as to contents, and kept in a bookcase or rack.

322. Charts and maps.

322.1 Each ATC facility shall maintain—

a. Current aeronautical charts covering a 50 NM radius of the facility or the local flying area, whichever is greater.

b. A facility status chart depicting the area controlled by the facility, to include navigation aids, assigned frequencies, locations by headings and distance, and current status.

322.2 Control tower shall maintain—

a. Crash grid map.

b. Airfield diagrams, to include—

(1) Runways, ramps, buildings, etc.

(2) Diagram for intersection TKOF.

(3) Areas not visible from the tower.

(4) ILS critical areas.

(5) Helipads.

c. Visibility checkpoint charts. If an Air Weather Service unit is serving the airfield, the AWS will provide these charts or diagrams. When no AWS unit is present, a physical site survey is the best way to select and measure visibility markers. When a physical survey is impractical, use maps or photo surveys.

d. Crosswind component chart for locally based aircraft.

e. Any additional drawings, charts, or maps needed; e.g., SIDs, circuit diagrams, etc.

f. Sunrise and sunset tables.

322.3 Terminal radar facilities shall maintain a diagram of each airfield provided service by the facility.

323. Facility training.

323.1 The ATC Chief/Facility Chief is responsible for the facility training program. The FTP will be conducted using the guidance outlined in section 500 of this manual.

323.2 Current and adequate ATC reference material shall be on hand for both facility operations and training purposes, with mandatory reference materials listed in appendix B of this manual.

324. Basic reference files.

324.1 The ATC Chief/Facility Chief is responsible for maintaining a complete reference source of written material required for administration of the facility's operation.

324.2 The basic reference file shall include all reference material listed in appendix A of this manual. This file shall contain extra copies of FTM, SOP, Operating Manuals, and other material of value to controllers and shall be available for off-duty study by ATC personnel.

325. Controller reference file.

325.1 The Facility Chief shall establish and maintain a controller's reference file. This shall consist of those publications, directives, etc., governing the daily operations of the facility and shall include—

- a. AR 95-37.
- b. FM 1-200.
- c. FAA Handbook 7110.65.
- d. FAA Handbook 7350.1, or in overseas facilities ICAO Document 7910.

e. FTM, Facility Training Manual which shall contain—

- (1) Letters of Agreement, Operations Letters, and facility memoranda, chapter VI.
- (2) SCATANA procedures, chapter VIII (if applicable).
- (3) Airfield emergency instructions, chapter XI.
- (4) High wind plan, chapter IV.

f. Photographs or diagrams of the video map, superimposed over radar ground returns, to assist in determining accuracy of scope alignment (if applicable).

g. Computed blind speed for radar equipment. This is a mandatory requirement for radar facilities having moving target indicator (MTI).

325.2 The controller reference file shall be maintained in a location readily available to the facility positions of operation and may be combined with the basic reference file at facilities where the Facility Chief office is located within the ATC facility operations room.

326. *Recent information file.*

326.1 The Facility Chief shall maintain a folder, clipboard, or binder for posting newly received information pertaining to facility operations or personnel. It shall be located in the facility operations room, or where provided in the controller briefing room.

326.2 Controllers shall initial all new material. When all controllers have initialed this material, it shall be removed and disposed of as necessary.

330. Letters of Agreement, Operations Letters, and Facility Memoranda

331. *General.*

331.1 Letters of Agreement, Operations Letters, and facility memoranda document administrative and operational procedures applicable to a specific facility, group of facilities, or to all facilities within a specified geographical area.

332. *Letters of Agreement.*

332.1 Letters of Agreement between the US Army and a host country, and other services, between ATC detachments and host post, camp, or stations, between centers, between centers and towers, between centers and terminal radar facilities on the same airfield or different airfields, are prepared when it is necessary to—

a. Define interfacility or interagency responsibilities and coordination requirements.

b. Define ATC services provided the host post, camp, or station and delegate extent of operational control of ATC personnel.

c. Establish or standardize operating methods.

d. Describe special operating conditions or specific air traffic control procedures.

e. Delegate areas of control jurisdiction and conditions of use.

f. Describe procedures or minima not contained within FAA Handbook 7110.65, this manual, or other pertinent directives.

332.2 The ATC Chief/Facility Chief responsible for developing letter of Agreement shall take the following action:

a. Insure that Letters of Agreement are properly prepared and coordinated with the airfield commander (when appropriate) or USACC agency/detachment commanders or ASD as appropriate prior to any other coordination.

b. Confine the material in each letter to a single subject or purpose.

c. Describe the responsibilities and procedures applicable to each facility and organization involved.

d. Attach charts or other visual presentations, when appropriate, to depict the conditions of the agreement.

e. Delegate responsibility for control of air traffic, where necessary, by describing the conditions governing the use of the area, specifying the details of control procedures to be used, and specifying communications and coordination procedures.

f. Coordinate with USACC/USAASD commanders, DARR, other facilities, agencies, or authorities, as required.

g. Prepare the letter in final form.

h. Establish an effective date which allows participating facilities/agencies to familiarize personnel and complete other preimplementation actions.

i. Obtain signatures of all authorities required.

j. Distribute copies of the signed letter in accordance with the distribution indicated in the letter.

332.2 A change in requirements for any party signing the agreement necessitates a rewrite of the letter. Coordination shall be the same as for the original letter.

332.4 ATC Chief/Facility Chief shall review and update all Letters of Agreement at least once annually, commencing with the effective date of the letter(s), to insure timeliness and conformance with current policies and directives. Review will be annotated with date and signature of all parties concerned.

332.5 The following example shall be used to the extent possible

EXAMPLE: Format for Approach Control/GCA Letter of Agreement
Letter of Agreement Between _____ Approach Control and _____

GCA _____ Approach Control Letter No. _____

GCA Letter No. _____

SUBJECT: Radar Control of IFR Arrivals at _____ Airfield

EFFECTIVE: _____

(Effective date of letter)

(No. and date of canceled letters)

This agreement governs the control of IFR arrivals at _____ airfield.

1. Conventional aircraft.
Primary and secondary fixes.
2. Jet aircraft.
Procedures for release to GCA during published instrument approaches.
3. Diverse approach.
4. Missed approach.
5. Coordination (transfer of information between facilities.) Attachments (list as required)

(Signature)

(Signature)

DISTRIBUTION:

Figure 3-1. Example of format for approach control/GCA letter of agreement.

333. Operations Letters.

333.1 Operations Letters between ATC facilities or between an ATC facility and other Army agencies located on the same airfield/heliport, are prepared to—

- a. Supplement established operational or procedural instructions.
- b. Establish or standardize operating methods.
- c. Describe special operating conditions or specific air traffic control procedures.
- d. Establish responsibilities for the operation of airfield equipments, for providing emergency services, and for reporting operating limitations and hazards.

333.2 The ATC Chief/Facility Chief responsible for developing an Operations Letter shall take the following action:

- a. Insure that the Operations Letter is properly prepared and coordinated with the airfield commander (when appropriate) or USACC agency/detachment commanders prior to any other coordination.
- b. Confine the material in each letter to a single subject or purpose.
- c. Describe the responsibilities and procedures applicable to each facility and organization involved.
- d. Inclose charts or other visual presentations,

when appropriate, to depict the conditions of the letter.

e. Delegate responsibility for control of aircraft, when necessary, by describing the area within which the responsibility is delegated, defining the conditions governing the use of the area, specifying the details of control procedures to be used, and specifying communications and coordination procedures.

f. Coordinate with USACC/USAASD commanders, other facilities, agencies, or authorities, as required.

g. Prepare the letter in final form.

h. Establish an effective date which allows participating facilities and agencies to familiarize personnel and complete other preimplementation actions.

i. Sign the letter and obtain signatures of other authorities as required. A copy will be retained by all parties concerned and will be reviewed periodically for currency or change as required.

333.3 A change in the requirements for any party signing the agreement necessitates a rewrite of the letter. Coordination and processing shall be the same as for the original letter.

333.4 The following example shall be used to the extent possible as the standard format for an Operations Letter.

EXAMPLE: Format for Control Tower/Airfield Operations Letter.

Operations Letter between _____ Airfield
Operations and _____ Control Tower.

(Name)

(Name) Airfield Operations Letter No. _____

(Name) Control Tower Letter No. _____

SUBJECT: (Short descriptive statement of the letter's content.)

EFFECTIVE: (Effective date of the letter) (No. of cancelled letters) (Use standard paragraph to outline the text of the letter.

Provide sufficient detail to preclude misunderstanding or misinterpretation of the procedures, responsibilities, required coordination, etc., intended.)

(Signature)

Airfield Operations Officer

(Signature)

ATC Chief/Facility Chief, Tower

(Name)

Airfield

DISTRIBUTION:

Figure 3-2 Example of format for control tower/airfield operations letter.

334. Facility memoranda.

334.1 Facility memoranda shall be issued when it is necessary to regulate and standardize the internal operation of a facility. They contain instructions pertaining to temporary administrative or operational practices and procedures within the facility.

334.2 Facility memorandum are applicable only to the internal operation of a facility. Do not issue a memorandum as a joint document applicable to two or more facilities.

334.3 Standard letter format shall be used when preparing facility memorandum. They are signed by the ATC Chief or Facility Chief.

340. Facility Operating Forms

341. General.

341.1 Personnel shall exercise care in the preparation of all forms to insure neat and accurate entries. These forms are a part of the facility's official records and may be referred to any time by authorized personnel or agencies.

341.2 Whenever practicable, entries should be typewritten; however, printed ink entries are permissible. Do not erase or strike over any entry. When it is necessary to correct an entry, type or draw a line through the incorrect portion and con-

tinue with the correct wording or entry. The controller correcting the error shall initial the correction.

342. DA Form 3501-R (Radar Operations Log) (fig 3-3).

342.1 Use this form to record air traffic in GCA facilities. Shift supervisor or, in his absence the senior controller on duty, is responsible for initiating the form at the beginning of each shift.

342.2 DA Form 3501-R is filed daily with DA Form 3502-R (Daily Report of Air Traffic Controller) (fig 3-4 and retained for a period of 30 days. DA Forms 3502R and 3503R will be reproduced locally on 8 x 10½ inch paper.)

342.3 Accomplish DA Form 3501-R as follows:

Item 1. Self-explanatory.

Item 2. Self-explanatory.

Item 3. Self-explanatory.

Column a. Insert a checkmark (✓) in the applicable column.

Column b. Self-explanatory.

Column c. Self-explanatory.

Column d. Self-explanatory.

Column e. Low approach (LA); full stop (FS); touch-and-go (TG); or other type of approach.

Column f. Operating initials of the controller conducting the surveillance portion of an approach.

Column g. Operating initials of the controller

conducting the final portion of a surveillance approach.

Column h. Operating initials of the controller conducting the final portion of a precision approach.

Column i. Operating initials of the controller monitoring an approach.

Column j. Operating initials of the controller monitoring a departure.

Column k. Operating initials of the controller conducting a simulator approach.

Column l. Self-explanatory.

Column m. Remarks—Missed approach (MA), other control instructions.

343. *DA Form 3502-R (Daily Report of Air Traffic Controller)* (fig 3-4).

343.1 All Army ATC facilities shall use DA Form 3502-R to record daily activities. This form shall be initiated at the beginning of each calendar day (0000 local time, or whenever a facility begins operations for the day). Entries shall be in GMT.

343.2 The shift supervisor shall complete the

signature block and record time on duty at the bottom of the page when assuming supervisory duties, and complete the off-duty block when being relieved of supervisory duties. If more than three shift supervisors are utilized in a 24-hour period, the signature blocks may contain more than one signature. All entries in the *Remarks* section of the form shall be followed by the operating initials of the individual making the entry.

343.3 Authorized Army, FAA and ICAO abbreviations and phrase contractions may be used for entries on the form.

343.4 Make entries as necessary to describe all abnormal conditions, unusual occurrences, or items of interest; i.e., equipment outage, incident/accidents, unsafe conditions, etc. If a requirement exists for recording on- and off-duty times for pay purposes, the reverse side of the form may be used for this purpose.

343.5 This form is filed daily and retained for a period of 30 days.

[illegible]

Figure 3-3. DA Form 3501-R (Radar Operations Log).

Figure 3-3. DA Form 3501-R (Radar Operations Log).

[illegible]

DA FORM 3502-R, 1 Jan 76

Edition of 1 Nov 72 is obsolete.

Figure 3-4. DA FORM 3502-R (Daily Report of Air Traffic Controller).

Figure 3-4. DA Form 3502-R (Daily Report of Air Traffic Controller).

344. DA Form 3503-R (Air Traffic Control Position Log) (fig 3-5).

344.1 DA Form 3503-R is used to record personnel changes at each operating position within an ATC facility. It is initiated at the beginning of each calendar day (0000 local time, or whenever a facility begins operations of the day) and additional pages are used as necessary to complete the day (2400 local time, or whenever a facility terminates its operations for the day).

344.2 Controllers assigned responsibility for an operating position are responsible for initiating DA Form 3503-R. If a trainee is assigned to the position, his initials, followed by a slant mark (/), and the controller's initials shall be entered.

344.3 DA Form 3503-R is filed daily with DA Form 3502-R (fig 3-4), and retained for a period of 30 days. DA Form 3503-R will be reproduced locally on 8 x 10½ inch paper.

[illegible]

DA FORM 3503-R, 1 Jan 76
Edition of 1 Nov 72 is obsolete

[illegible]

DA FORM 3503-R, 1 Jan 76
Edition of 1 Nov 72 is obsolete

[illegible]

DA FORM 3503-R, 1 Jan 78
Edition of 1 Nov 72 is obsolete

[illegible]

DA FORM 3503-R, 1 Jan 76
1 Nov 72 is obsolete

Figure 3-5. DA FORM 3503-R (Position Log)

Figure 3-5. DA FORM 3503-R (Position Log).

350. Handling Aircraft Accidents and Incidents**351. General.**

351.1 Involvement of components of the Army ATC system in an aircraft accident or incident may include—

a. Pilot irregularities or deviations from established directions which require special handling by controllers; i.e., given priority, resulting in delay or resequencing of other aircraft.

b. Operational errors involving failure of equipment, personnel, procedures or other system components, individually or in combination, which results in a deviation from established air traffic control standards.

c. Near collisions reported to a facility by the pilot of an aircraft involved.

351.2 Whenever a facility, service, or navigational aid is, or is suspected to have been, involved in an aircraft accident or incident, action shall be taken to—

a. Provide for continuing safe, orderly, and expeditious movement of all air traffic operating under the jurisdiction of the ATC facility.

b. Obtain accurate and complete information for use as the basis for detailed investigations by the Facility Chief, other agencies, and higher headquarters.

352. Responsibilities.

352.1 Following an aircraft accident or incident, the shift supervisor shall—

a. Notify the Facility Chief and other designated personnel.

b. Call the weather observer and request a local weather observation.

c. Cause the removal and safeguarding of any recording tapes which are, or may be, pertinent to the accident or incident.

d. Record all appropriate details, including the local weather observation, on DA Form 3502-R (Fig 3-4).

352.2 As soon as possible after notification of an accident or incident, the Facility Chief or his designated representative shall—

a. Relieve the controller for physical/psychological evaluation by the local medical officer/flight surgeon if there is the slightest indication that the controller contributed to the accident/incident. (The controller shall not be returned to duty until a clearance is obtained from the local medical officer/flight surgeon.)

b. Obtain a written statement from the controller and supervisory personnel involved.

c. Together with technically qualified personnel, examine operating characteristics and equipment condition to determine whether the equipment could have contributed to the accident or incident.

353. Accidents/incidents involving radar facilities.

353.1 When a radar facility is, or is suspected to have been, involved in an accident or incident, the facility shall discontinue providing radar service as indicated below:

a. During VFR weather conditions, discontinue radar service until the Facility Chief or shift supervisor has determined that radar equipment is operating satisfactorily. If satisfactory results are not obtained, NOTAM action should be initiated stating "radar out of service."

b. During IFR weather conditions (NOTAM action should be initiated stating "radar out of service"), discontinue radar service, except—

(1) When inbound or holding aircraft cannot land by use of other facilities or proceed to an alternate, and the pilot has been informed and concurs in the use of the equipment under these conditions.

(2) Under conditions requiring the use of a radar facility that has possible damage, without other landing choices, and after the shift supervisor's check of radar equipment prior to continuing radar service.

354. Retention of accident/incident records.

354.1 Written and recorded records pertaining to an aircraft accident or incident shall be retained for a minimum of 6 months in the ATC facility, (para 443.2, 443.3, and 443.4).

355. Reports

355.1 Aircraft accidents or incidents involving, or suspected to have involved, ATC services, facilities or navigational aids, shall be reported according to Department of the Army directives. (AR 95-12 and AR 385-40.)

355.2 Controllers witnessing operational hazards (procedural or material) to safe air traffic control practices shall immediately submit an Operational Hazard Report (DA Form 2696) to their supervisor. OHR's are not submitted when action is appropriate under AR 95-12 or AR 385-40. The ATC Chief/Facility Chief shall ensure that report forms are correct and complete and are submitted through USACC agency/detachment commander to the local aviation safety officer or airfield operations officer. A complete narrative on the processing of OHR's is contained in AR 95-5. An information copy of the submitted OHR shall be retained at the facility until final action has been completed, at which time it will be destroyed. The Facility Training Program shall include instructions for the preparation and submission of OHR's.

360. Release of Information**361. Policy and responsibility.**

361.1 Information pertaining to an aircraft accident or incident shall be made available only to authorized personnel. The airfield commander and the ATC Chief/Facility Chief are responsible for compiling and releasing this information.

362. Removal of original records.

362.1 Records of any type, recorded or written, concerning accidents or incidents shall not be released from facility custody without proper authority. This responsibility rests with the ATC Chief/Facility Chief; however, it will not be released without proper coordination between the airfield commander and appropriate USACC agency/detachment commander.

362.2 The policy stated in para 362.1 does not preclude making copies of the original voice recording for use by persons officially concerned. Copies may be made immediately for or by investigation personnel, and they may transcribe from these copies pending availability of the original facility transcript. The original recording must remain in custody of, and be safeguarded by, the custodian.

362.3 When transcripts pertaining to an accident or incident are necessary or when additional copies of original tape recordings are required, they may be made from the original tape recording. Playback and handling of the original tape recording must be kept to an absolute minimum if local duplication is not possible. When making transcriptions—

a. Include in the reproduction all data pertinent to the accident/incident from at least 5 minutes before the initial contact to at least 5 minutes after the last contact.

b. Use a direct electronic connection between the playback and the recording equipment to accomplish this re-recording. Do not use the speaker-to-microphone method during the re-recording process, except where a direct electronic connection is not possible.

c. Personnel supervising the reproduction process shall preface the copy or separate portions of the copy, if several channels are recorded, with a statement containing the information normally furnished at the beginning of written transcriptions. (See 363.1, except omit the abbreviations mentioned in 363.1c.) Include—

(1) The date and time the reproduction was made.

(2) The name of the person supervising the reproduction.

(3) A certification that the reproduction is a true copy of the original recording.

363. Transcription preparation and handling.

363.1 When authorized, use a Department of

the Army letterhead as the first page of each transcription. Include the following information:

a. Subject.

b. Identity of the recording facility.

c. List of facilities making transmissions, together with the abbreviation for each, as used in the body of the transcript.

d. Frequency, landline, or position being recorded.

e. Date and period of time covered by the transcript.

f. Mark complete transcript **FOR OFFICIAL USE ONLY (SPECIAL HANDLING REQUIRED)** (AR 340-16, 340-17).

g. Certification.

363.2 ATC facilities indicated in the transcription shall be abbreviated by use of appropriate location designator, followed by ARTCC, TWR, APC, ARAC, or GCA. Aircraft may be identified by an abbreviated call sign when confusion will not result.

363.3 Use the following format in typing the transcription:

a. Precede each transcription with the identity of the transmitting station. When the station is unknown, UNK shall be used.

b. Single space the body of the transcription.

c. Separate each contact from the next contact by double spacing.

d. Show breaks in continuity of contact through use of a series of asterisks; garble as such, otherwise the transcription shall be verbatim.

e. Where time code generator systems are installed, make time entries at approximately 1-minute intervals in the body of the transcript.

363.4 Certify the transcription as follows:

As custodian of the original recording, I hereby certify this to be a true and exact (copy/transcript) thereof.

(Name)

(Grade)

(Title)

364. Certified copies of records.

364.1 When copies of written records are required, each shall be certified as follows:

I hereby certify this to be a true and exact copy of the original record on file at this office.

(Name)

(Grade)

(Title)

370. Weather Observations

371. Cooperative Weather Reporting. Accurate weather observations and timely dissemination thereof are essential to safe and efficient aircraft operations. Tower controllers shall, therefore, maintain a "cooperative weather watch" and advise the AWS weather observer of any differences between observed (by the controller) and reported (by the weather observer) weather conditions that may affect flight safety. Elements to be reported vary from airfield to airfield, and should be agreed upon in coordination between the traffic control agency and the AWS unit. Those weather elements not readily available to the weather observer should receive the most attention; for example, changing prevailing, sector, or quadrant visibility; lowering ceilings; the beginning or ending of precipitation; thunderstorms or other severe weather; or the approach of fog banks or other obstructions to vision in or near the approach zone.

372. Relay of Observations. Controllers shall relay to arriving aircraft the current weather observation, as well as remarks such as the location and movement of thunderstorms, rapidly deteriorating visibility, or the presence of obscuring phenomena that could affect an approach. Tower controllers shall also advise terminal radar facilities of any such observed weather phenomena not included in the current weather sequence.

373. Use and Display of Weather Data.

373.1 Facility Chiefs shall implement procedures to insure timely receipt of weather information, to include local observations and forecasts, weather warnings, met watch advisories, weather radar reports, and pilot reports.

373.2 The shift supervisor on duty shall insure that current weather data is displayed so as to be readily visible and readable from all controller positions.

373.3 Controllers shall familiarize themselves with current and forecast weather conditions before assuming duty.

374. Posting Weather Data.

374.1 Post weather data on 5x8 inch note pads or on the reverse side of flight progress strips. Weather data received on autowriters, teletypes, or similar weather dissemination systems need not be transferred to other forms provided it is visible and readable from all controller positions.

374.2 Use standard weather symbols and abbreviations. Include time of receipt and initials of the provider when dissemination is by voice.

374.3 File note pads and flight progress strips used to record weather information daily; retain for 15 days.

374.4 Weather information received by teleautograph, teletype, or other weather dissemination systems need not be recopied and filed if there is a Letter of Agreement between the Air Force Weather Detachment and the facility to the effect that the Air Force will maintain this file and make it available to the facility as needed.

375. Estimated altimeter settings. Facility Chiefs shall implement procedures to ensure that "estimated altimeter settings" are never used or used by air traffic control personnel. (Exception stated in para 421.2c (3).) Additionally, ARTS facilities shall ensure that "estimated altimeter settings" are not input to an operational computer.

SECTION 400

FACILITY EQUIPMENT AND OPERATING PROCEDURES

410. General

411. *Equipment layout.*

411.1 Standard equipment layouts of all facilities are contained in TB 95-1.

412. *Standards.*

412.1 The standards contained herein are in addition to instructions contained in other applicable directives.

413. *Emergency lighting in facilities.*

413.1 Provisions shall be made to provide emergency lighting in all air traffic control facilities. An automatic battery powered system is desirable; however, two serviceable flashlights, readily accessible to the controller, may be used to satisfy this requirement. When backup power with automatic changeover is provided and power can be transferred within 15 seconds of power failure, the requirement for automatic battery-powered system (or flashlights) shall be deleted.

413.2 When flashlights are provided, Facility Chief shall establish procedures to insure that they are serviceable at all times.

414. *Facility clocks.*

414.1 A reliable clock shall be visible from each position of operation in all ATC facilities. Clocks shall be adjusted at least once each 12 hours, as follows:

a. In approach control facilities, clocks are set to agree with those of the enroute facility responsible for the terminal facility.

b. In all other facilities, clocks are set to agree with the approach control facility serving the airfield.

414.2 Results of time checks shall be entered on DA Form 3502-R (fig 3-4).

415. *Equipment checks.*

415.1 As soon as possible after assuming responsibility for facility operations, the shift supervisor shall insure that applicable equipment checks are performed and results of checks recorded on DA Form 3502-R on the following:

a. Radio equipment. When practicable, radio checks should be made with airborne aircraft or another ground facility.

b. Tele-autograph or other weather disseminating systems.

c. Surveillance radar and IFF/SIF. Whenever practicable, checks shall be made with live targets and include all required features of the equipment.

d. Scope and cursor alignment on precision radar equipment.

e. Tower/radar coordination system lights.

415.5 All checks shall be held to the absolute minimum period of time and performed, when possible, during periods of light traffic.

416. *Calibration of altimeter setting indicators and aircraft altimeters.*

416.1 Altimeter setting indicators used in ATC facilities shall be calibrated in accordance with TB 9-6660-270-50. They shall also be checked whenever inaccurate operation is evident or suspected.

416.2 Aircraft altimeters authorized in mobile control towers shall be rotated so as to insure that one is undergoing inspection and calibration at all times.

417. *Radar/NAVAIDS emergency warning and evacuation alarms.*

417.1 In the event of an emergency landing, or when for any reason a landing aircraft might present a hazard to ground personnel, the tower controller shall activate the emergency warning system. The controller shall also notify GCA/ARAC personnel of the pending arrival through normal communications circuits.

417.2 If an imminent hazard to GCA/ARAC develops, the tower controller shall immediately activate the radar emergency alarm switch (lift red cover on AN/FSW-8 emergency alarm switch and place switch in ON position). Upon receipt of the warning, radar personnel shall evacuate the facility except when safety of flight would be jeopardized by the evacuation of all personnel; i.e., minimum emergency fuel aircraft on PAR final during minimum weather conditions. In these instances, the minimum number of personnel should remain until landing is assured or alternate course of action is taken.

417.3 Because of the immediate evacuation requirement, the radar emergency alarm switch shall not be activated if there is time to provide adequate warning using routine communications.

417.4. The radar emergency alarm switch shall be left on until it has been acknowledged by radar personnel or the tower controller observes the radar personnel evacuating the facility.

418. *Magnetizing of indicators.*

418.1 The instrument face covers should be cleaned by using a soft rag dampened with a mild

detergent and water solution, and wiped dry with a soft, scratch-free type cloth. Cleaning instrument face covers with dry cloth or tissue can result in static charges on the glass or plastic which will magnetize the instruments and cause serious errors in the readings or indications. Equipment in this category includes wind direction and velocity indicators, clocks, radar and television indicators, and direct reading altimeters.

420. Towers and Nonradar Approach Control

421. Tower equipment.

421.1 In addition to the equipment requirements stated in TB 95-1, each control tower shall be provided the following equipment as required.

- a. Flight progress strip holders.
- b. Monitor for NAVAIDS.
- c. Tower/radar coordination system.
- d. Binocular(s).
- e. Light gun(s).
- f. Standard VFR traffic counter(s) (mechanical).

421.2 The altimeter setting issued by the weather station serving the airfield is the official setting.

a. ATC facilities providing air traffic service shall compare the official altimeter setting with their instrument's setting at least once every 8 hours. Any difference shall be recorded on the face of the instrument with grease pencil and recorded on DA Form 3502-R. The correction factor shall be applied to the reading obtained from the facility instrument prior to transmitting the altimeter setting to a pilot or another facility. Use of the facility instrument shall be discontinued whenever the correction factor exceeds plus or minus 0.04 inch of mercury.

b. Use of aircraft altimeter in facilities providing air traffic service will be in accordance with the following:

(1) Prior to issuing altimeter settings or during the adjusting procedure, the face of the instrument shall be tapped lightly with the finger to eliminate instrument lag.

(2) Three altimeters should be furnished each facility providing this type service. Two altimeters will be used when computing the altimeter setting to be issued. At least once every 8 hours the official setting shall be set in the Kollsman window on each of the two altimeters. The difference in feet between the indicated altitude on the instruments and the actual altitude is noted and written on the face of the instruments with a grease pencil; i.e., +10, -20. Maximum allowable error is plus or minus 40 feet. Frequent observations and adjustments of the instruments shall be made to insure that the indicated altitude, initially observed, is maintained.

(3) If an official altimeter setting is unavailable,

tactical facilities providing air traffic service shall adjust two aircraft altimeters to indicate the actual height above mean sea level (MSL). The average of the two altimeter settings, as indicated in the Kollsman windows, shall be issued as estimated; i.e., "Estimated altimeter, three zero zero four."

421.3 At locations where a clearance delivery position is required, the transmitter/receiver selector panel for the clearance delivery frequency shall be located adjacent to the flight data position to facilitate coordination. This will also permit combining clearance delivery duties with either flight data or ground control duties when traffic workload does not warrant manning these positions separately.

422. Flight data.

422.1 Specific procedures for posting flight data concerning VFR flights are not required.

422.2 Facilities receiving, relaying, or transmitting ATC clearances over landline circuits shall make written record of these clearances on flight progress strips.

423. Approach control equipment (nonradar).

423.1 Flight progress strip holders/flight progress boards and appropriate communications control consoles are normally used to provide nonradar approach control services from the control tower cab.

423.2 Where nonradar approach control is located separately from the control tower, the following minimum basic equipment shall be provided:

- a. Flight progress strip holders/flight progress boards.
- b. AN/FSW-8.
- c. Tele-autograph, similar weather disseminating devices, or method for displaying current weather.

424. Arrangement of postings—nonradar approach control.

424.1 Normally, only one strip will be used for each inbound or outbound flight. Where this is not practicable, due to the area of jurisdiction, number of fixes, airports served, etc., Facility Chiefs may establish fix designators to facilitate traffic control.

424.2 Strips shall be sequenced according to altitude level over a fix.

424.3 Strips concerning arriving aircraft shall be maintained in proper sequence until a report is received that landing is assured or that a missed approach has started. In the event of a missed approach, a new flight progress strip is prepared.

425. Postings—nonradar approach control.

425.1 Flight progress reports shall be posted directly on the appropriate flight progress strip. Additional incoming flight progress data, required by the controller, shall be posted on the flight

progress strip and brought to the attention of the controller with the least possible delay and shall be given priority handling over other types of incoming flight data.

430. Radar

431. General.

431.1 Approved radar systems may be used for—

- a. Surveillance of aircraft to assure the effective use of airspace.
- b. Vectoring aircraft to provide separation and radar navigation.
- c. Monitoring instrument approaches.
- d. Providing radar traffic, weather, chaff, and bird activity information.
- e. Conducting precision and surveillance approaches.
- f. Providing assistance to pilots of aircraft in distress.

431.2 When PAR monitored ILS approaches are approved, the course and glide slope alignment of PAR and ILS serving the same runway shall coincide within 0.2 degree.

431.3 Before authorizing use of a tactical GCA to control traffic, procedures shall be established to insure that—

- a. The radar set is operational and sited in accordance with the technical manuals pertaining to the equipment.
- b. The controllers are qualified.
- c. The ATC procedures and the terminal instrument procedures for which the radar is to be used have been developed in accordance with TM 11-2557-26, approved for use by proper approving authority, and flight checked under VFR conditions.

432. Radar mapping requirements.

432.1 The minimum radar mapping capability required for approach control services is one of the following:

- a. Dual video mapper.
- b. Adequate map overlay.
- c. Single video mapper, plus a map overlay.

432.2 Although the AN/GPA-70 meets the requirements for dual video mapper, a map overlay should be available for use in the event of video mapper failure.

432.3 Grease pencil marking, plastic tape, compass rose grid lines, rangemarks, or other innovations shall not be used in lieu of an adequate map overlay or video mapper.

432.4 When the radar system does not conform to the minimum radar mapping requirements, radar services shall be limited to—

- a. Separating properly identified aircraft targets.
- b. Vectoring aircraft to intercept a PAR final approach course.

c. Providing radar service in areas that insure no conflict with traffic on airways, other ATC area of jurisdiction, restricted or prohibited areas, terrain, airport control zones, etc.

432.5 Facility Chiefs shall coordinate, as necessary, with adjacent radar facilities and the responsible authority for flight check to insure the accuracy and adequacy of common reference points on radar maps when such points are used in providing air traffic control services.

432.6 To reduce scope clutter and increase operational efficiency, data on video maps should be limited to the following:

- a. Airfields.
- b. Runway centerline extension to a minimum of 6 miles.
- c. Radio navigation and approach aids.
- d. Reporting points.
- e. Airway/route centerlines.
- f. Boundaries (control, special use areas, terminal buffer areas, outer fix holding pattern areas, etc.).
- g. Handoff points.
- h. Special use tracks (scramble, recovery, SIDs, etc.).
- i. Major obstructions.
- j. Permanent echoes.
- k. Prominent geographic features (islands, mountains, etc.).
- l. Map alignment indicators.

433. Radar beacon (IFF/SIF).

433.1 Radar beacon decoders permit controllers to display responses from selected transponder reply codes in modes 1, 2, and 3. Modes 1 and 2 are not authorized for air traffic control purposes and shall not be used except for emergencies, identification, or when directed by appropriate authority.

433.2 SIF Mode 1 and Mode 2 replies are defined by appropriate command instructions. Controllers shall not instruct a pilot to change to or turn off these modes without specific approval from a responsible authority.

433.3 Existing SIF equipment does not display emergency returns without specific actions required of the controller. Until provisions are made for such features, controllers shall not be required to monitor radar indicators for emergency display possibilities except—

a. When advised by an aircraft that an emergency condition exists and that the airborne equipment is set to provide emergency returns.

b. In support of emergency situations at the request of an ATC facility or appropriate agency.

433.4 To obtain the desired display with currently installed equipment, controllers should—

- a. Select only the radar beacon codes necessary to display radar beacon replies associated with his area of jurisdiction.

b. Select the raw/test position to display aircraft equipped only with IFF equipment. SIF equipped aircraft replies will appear as undecoded pulse trains when equipment is operated in this configuration.

c. When using IFF equipment, assign Mode 3 to aircraft equipped with SIF equipment.

433.5 The double code train displayed by the identification feature is designed to appear on the indicator for a period of 30 seconds after the switch on the airborne equipment is released. Controller shall not instruct a pilot to turn off this component of the airborne equipment.

433.6 When surveillance radar is not usable, and IFF/SIF alignment has been verified, IFF/SIF returns may be used to vector aircraft to a point within PAR coverage, where the final approach commences. IFF/SIF returns shall not be used to conduct ASR approaches.

434. *Airport surveillance radar (ASR).*

434.1 To provide surveillance approaches, indicators shall be equipped with video mapping, overlays, or electronic cursor for providing means of reference to the runway centerline extended. This centerline reference shall be extended to a minimum of 6 miles.

434.2 Indicator grid lines may be used to provide an extended runway centerline during periods of temporary malfunctioning of video mapping or electronic cursor equipment.

435. *Terminal radar equipment.*

435.1 Each terminal radar facility shall be provided the following minimum equipment as required:

- a. Surveillance and precision radar display.
- b. AN/FSW-8 or similar communications console equipment.
- c. Radio receiver and transmitter controls.
- d. Tele-autograph, similar weather dissemination devices, or method of displaying current weather.
- e. Tower/radar coordination system.
- f. Wind direction and speed indicator.
- g. Navigational aid monitor (approach control).
- h. IFF/SIF.
- i. Radar NAVAIDS emergency warning alarm system.
- j. Video mapper or map overlay (approach control).
- k. Flight progress strip holders/flight progress boards.

436. *Posting flight progress strips—radar approach control.*

436.1 Ordinarily, only one strip will be used for each inbound or outbound flight. Where this is not practicable due to area of jurisdiction, number of fixes, airfields served, positions of operation, etc.,

Facility Chief shall establish procedures to facilitate traffic control.

436.2 Strips shall be sequenced according to time over a fix.

436.3 Strips concerning inbound flights shall initially be posted at the approach control position of operation. The strip is transferred to the arrival controller and precision controller as handoffs are effected.

436.4 Strips concerning arriving aircraft shall be maintained in proper sequence until transfer of control is effected or report is received that landing is assured or missed approach has started.

437. *Handling flight data.*

437.1 In radar approach control facilities, flight progress reports shall be posted directly on the appropriate flight progress strip. Additional incoming flight progress data required by the controller shall be posted on the flight progress strip and brought to the attention of the controller with the least possible delay and shall be given priority handling over other types of incoming flight data.

437.2 In GCA facilities, all flight data shall be posted directly on DA Form 3501-R (fig 3-3).

440. *Recorders*

441. *General.*

441.1 Each ATC facility shall record all pertinent data transmitted or received via radio or landline systems.

441.2 Record by position all pertinent data transmitted or received via radio systems.

442. *Recorder use.*

442.1 A separate channel on each recording machine shall be used to record time at all ATC facilities equipped with time-code generator systems.

442.2 Recording equipment shall be used to record operating positions in the following order of priority:

- a. Precision approach radar.
- b. Arrival control.
- c. Approach control.
- d. Departure control.
- e. Local control.
- f. Flight data.
- g. Clearance delivery.
- h. Coordinator.
- i. Interfacility coordination.
- j. Ground control.
- k. Assistant controller.
- l. Supervisor.

442.3 After the requirements of 442.2 are met, use any remaining spare channels for recording of the primary radio transmit/receive frequency

associated with an operating position in the following order of priority:

- a. Emergency frequencies.
- b. Precision approach radar.
- c. Arrival control.
- d. Approach control.
- e. Departure control.
- f. Local control.
- g. Clearance delivery.
- h. Ground control.

442.4 When additional operation positions are implemented in a facility, recorder channels assigned to functions in para 442.3 shall be released in reverse priority to record the newly established position(s).

443. *Handling of recorder tapes.*

443.1 Assign and attach a permanent identification number to each tape reel in service in the facility. The following identifying information concerning each tape shall be posted directly on the reel immediately after that reel is removed from the recorder.

- a. Recorder transport position.
- b. Date and time GMT (24-hour clock).
- c. Initials of person changing tape.

443.2 Remove pertinent tapes immediately after the occurrence of an accident/incident and label, certify, and secure the entire tape.

443.3 In those instances when recorder tape is to be made part of an accident/incident file, it is only necessary to retain that part of the tape which includes the conversation made during the time period involving the particular incident, plus an initial and terminal overrun of 5-minutes' tape running time. After the removal of the pertinent portion of the tape from the whole reel, splice remaining tape and return it to service.

443.4 Identify and certify removed tapes containing information concerning an accident/incident as follows:

I certify that this is the original recoring made in (Facility name) containing all conversation on channel(s) position(s) _____ pertaining to (accident/incident) _____

dated _____
(Name) _____
(Title) _____

444. *Checking recorder operation.*

444.1 Quality of the recordings is monitored by controller personnel. To insure that usable recordings are being made, Facility Chief/shift supervisors shall—

- a. At the beginning of each shift, insure that all recording channels are operating properly and are producing clear audible recordings.
- b. Whenever practicable, perform periodic checks of recorder operation during each shift.

c. Insure that entries are made on DA Form 3502-R (fig 3-4) to indicate results of these checks.

444.2 Controller personnel shall perform the recorder checks in those facilities where recorders are installed in or convenient to the operations room.

444.3 At those facilities where controller personnel are not available for checking or changing recorder tapes, or the recorders are installed in equipment rooms remote from the operations room, the ATC Chief/Facility Chief shall coordinate an agreement with the chief of maintenance to perform these duties. This agreement shall establish responsibilities for the proper checking and marking of recorder reels; however, the ATC Chief/Facility Chief will remain custodian of the tapes.

444.4 In those instances where controller personnel assume responsibility for checking or changing recorder tapes, the ATC Chief/Facility Chief shall arrange for maintenance personnel to brief all concerned controller personnel in the proper method to be used.

444.5 ATC Chief/Facility Chiefs shall arrange with the chief of maintenance to establish procedures that assure the audio level to the recorders is checked following audio equipment change or maintenance. Notation of these checks shall be made of DA Form 3502-R (fig 3-4).

445. *Storage and retention.*

445.1 Normal recorded information is retained for 15 days and then erased. When several tapes contain small amounts of information which is to be retained beyond the 15-day period, with the exception of aircraft accident/incident information, the information may be re-recorded on a single tape, marked accordingly, and retained. Original tapes may then be retained. Original tapes may then be erased.

445.2 Tape(s) shall be set aside for transcribing original information concerning aircraft accidents/incidents, operational hazards and alleged violations. The transcription is authenticated by the designated custodian and retained for a minimum period of 6 months. When equipment is not available for re-recording, original recordings are retained for 6 months.

446. *Custodial control.*

446.1 The ATC Chief/Facility Chief has custodial responsibility for tape recordings made on Army-furnished or maintained recorder equipment.

446.2 Where the FAA has the responsibility for maintenance of recorder equipment, the FAA has custodial responsibility for the recorder tapes. In such cases, a Letter of Agreement will be initiated between the FAA and the facility.

450. Radio and Landline Communications Operation

451. Responsibility.

451.1 The shift supervisor on duty is responsible for all communications emanating from the facility. The Facility Chief shall insure that continuous checks are made to detect and prevent superfluous or unauthorized transmissions.

451.2 Controllers shall not knowingly transmit or permit to be transmitted—

- a. Obscene, indecent, or profane language.
- b. False or deceptive communication.
- c. Willful or malicious interference with other communications.
- d. Identification not authorized or assigned.
- e. Superfluous or unauthorized transmission including remarks of a personal nature.

452. *Authorized messages not directly associated with air traffic control.*

452.1 In addition to normal air traffic control transmissions, occasions may arise when messages, by a third party, pertaining to safety of aircraft operation or preservation of life or property are necessary. Such messages are authorized for handling on air traffic control radio communications channels. They may be handled by controller personnel or by certain persons concerned with the emergency. These individuals shall be given access to facilities to personally issue such messages for their respective interests provided—

- a. Control instruction shall not be issued.
- b. Such transmissions can be interrupted when required to continue air traffic control services.
- c. This type of transmission shall be recorded on DA Form 3502-R.

452.2 Non-air traffic control instructions for organizational assigned aircraft are made only on assigned tactical frequencies. ATC facilities may relay non-ATC instructions only when no other sources of communications are available.

452.3 All instances where air traffic control frequencies are used to transmit non-ATC instructions shall be entered on DA Form 3502-R (fig 3-4). No further action is required if the broadcast does not affect the control of air traffic.

453. Landline communications.

453.1 All telephone/landlines for fixed ATC facilities shall be terminated in a communications key system installed in the ATC facility. Direct landlines are authorized to adjacent ATC facilities and area ATC centers.

453.2 Direct landlines are authorized between ATC facilities and command posts. Use of such landlines shall be restricted to the relay of essential command control instructions and advisories and

handled secondary to the primary function of air traffic control services. They should not be used to relay information that is available from other sources (departure and arrival times, load messages, etc.). If either a command post or an ATC facility requires immediate priority over the other, they shall on initial contact state, "STANDBY FOR EMERGENCY INSTRUCTIONS." All such instances shall be entered on DA Form 3502-R (fig 3-4).

454. Radio operation.

454.1 During radar approaches, the controller shall not continuously key the radio transmitter except in an emergency or when he deems it necessary for flight safety. The decision on how often the transmitter is keyed to accomplish the approach is the controller's prerogative within the limitation prescribed for lost communications in FAA Handbook 7110.8.

454.2 To preclude or minimize possible interference with other facilities/stations, controllers shall not normally transmit simultaneously on two or more frequencies. Simultaneous transmissions may be made when traffic conditions so dictate or when, in the controller's judgment, such practice will enhance the safe and efficient movement of aircraft. Such practice shall always be employed by VFR control towers when, in the controller's judgment, flying safety or ATC procedures would be enhanced by providing aircraft with a composite traffic picture.

455. Emergency frequencies 121.5 MHz and 243.0 MHz.

455.1 ATC facilities shall have transmit and receive capability on emergency frequencies are not required when other closely located facilities are equipped when emergency frequency capability. The following requirements shall be maintained:

- a. Geographical area coverage shall not be derogated.
- b. Facilities without emergency frequency capability shall have appropriate landlines for relay of emergency information.

455.2 All facilities with emergency frequency capability shall maintain a continuous monitor of these frequencies.

455.3 UHF emergency frequency 243.0 MHz installed in military aircraft is provided with an override arrangement. As a result, transmissions on this frequency are received by all military aircraft within the transmitter's area of coverage. Unnecessary emissions on this frequency derogate communications on air traffic control frequencies and may interfere with bonafide emergency communications. Reduce transmissions on 243.0 MHz to the absolute minimum consistent with safety.

460. Interruptions to Navigational Aids, Communications, and Radar Equipment

461. Maintenance shutdown policy.

461.1 Maintenance personnel shall request approval for proposed maintenance shutdown of navigational aids, communications, or radar equipment.

461.2 ATC Chief/Facility Chief, approach control or tower, or their designated representative, in that order, shall serve as approval authority for maintenance shutdown of equipment and for establishing any necessary priorities for restoring these units to operation. Approved shutdowns shall be coordinated with the airfield commander or his designated representative.

461.3 When the shutdown of a navigational aid will affect operation at other ATC facilities, the facility serving as approving authority shall coordinate with other facilities concerned.

461.4 Air traffic control personnel shall cooperate fully with maintenance personnel in the performance of periodic maintenance to insure that equipment operates reliably, particularly during IFR weather conditions. If conditions prevent approval of a shutdown at the time requested, indicate an alternative time.

461.5 To the maximum extent possible, approve planned maintenance shutdown of critical air traffic system components such as radar, communications, etc., during hours of least traffic activity, including hours of darkness.

461.6 Preventive maintenance on navigational aids and radar facilities is performed during VFR weather conditions; however, when continued IFR weather conditions or tactical operations make this impractical, consideration must be given to local operational requirements.

461.7 If maintenance is performed which could affect the reliability of a navigational aid or if a navigational aid is not operating according to specified standards, the identification feature shall be removed or discontinued and a Notice to Airmen shall be issued.

462. Monitoring navigational aid equipment.

462.1 The approach control facility is designated as the primary monitor facility. At locations without approach control, the control tower is so designated.

462.2 Monitors not providing automatic visual and aural alarms shall be checked at least hourly and results entered on DA Form 3502-R (fig 3-4).

462.3 When a facility normally delegated primary monitor responsibility does not operate on a continuous basis, this responsibility shall be assigned to another facility/agency if the navigational aid is to remain on the air continuously and provided—

a. Continuous manning is maintained.

b. Automatic visual and aural alarms for each navigational aid are installed in the facility/agency.

c. Maintenance personnel are readily available in the event of equipment malfunction.

d. Detailed procedures, including responsibility or submission of NOTAMs in the event of equipment malfunction, are contained in a Letter of Agreement or Operations Letter.

463. Reporting interruptions and malfunctions.

463.1 The Facility Chief is responsible for establishing procedures for reporting interruptions to navigational aids and malfunction of communications and radar equipment. This responsibility includes insuring the timely responsiveness of maintenance personnel to a report of interruption or malfunction.

463.2 The shift supervisor on duty shall report any known or reported malfunction of equipment or interruption to a navigational aid to the appropriate maintenance personnel.

464. Notices to Airmen (NOTAM).

464.1 The airfield commander is responsible for formulation and issuance of NOTAMs in accordance with the provisions of AR 95-9, FAA Handbook 7110.10, *Flight Services*, and/or other applicable directives.

464.2 The primary monitor in a facility/agency is normally designated as the focal point for all information relating to the performance of navigational aids and air traffic control facilities. At locations where the primary monitor does not provide continuous service, a designated alternate monitor shall perform this service. The airfield commander shall establish procedures to insure that detailed information concerning interruptions and malfunctions is reported to the designated monitor who will prepare and dispatch any required NOTAMs.

465. Use of backup power generators.

465.1 The ATC Chief/Facility Chief is responsible for insuring that the auxiliary power source for ATC facilities and navigational aids are maintained in optimum operational condition.

465.2 Maintenance personnel shall obtain approval from the ATC Chief/Facility Chief, or in his absence the shift supervisor on duty, before transferring power of ATC facilities or navigational aids during other than emergency situations.

470. Operation of Airfield Light Systems and Visual Aids

471. General airfield lighting.

471.1 Operation of airfield light systems and visual aids is the responsibility of the control tower. Airfield lighting shall be operated IAW FAA Handbook 7110.65. Deviations from this policy shall

be fully outlined in a Letter of Agreement or Operations Letter and the facility Standing Operating Procedures.

471.2 The operation of airfield lights during the hours the tower is closed shall be in accordance with Letters of Agreement or Operations Letters.

471.3 If a lighting system is not compatible with the instructions contained herein, or if the airfield commander prescribes operating periods contrary to those in this section (except for the airfield rotating beacon), the airfield lighting system may be operated provided a Letter of Agreement or Operations Letter is executed. Each letter shall set forth the operating periods and other pertinent provisions and a statement that lights will be available upon pilot request.

471.4 During the period that a control tower is unattended and duplicate lighting controls are not installed in another facility/agency, the approach light system (ALS) shall be turned on and set to the lowest brightness level. A NOTAM shall be issued containing information that the system is unattended. Sequence flashing lights shall be turned off.

471.5 The airfield commander is responsible for the following actions:

a. At least once daily perform a check of the approach light system, visual approach slope indicator (VASI), runway and taxiway lights. Any discrepancy noted on the check or any report of malfunctioning, either observed or received from any source, shall be reported to the local maintenance personnel and control tower as soon as possible, regardless of the time of day or night.

b. Determine the status of all airfield lighting, make the final decision regarding its operation, and issue any required NOTAM.

c. Where runway floodlights are installed, local procedures shall be established for their operation. The procedure shall include that they be turned off when an aircraft is required to taxi toward the lights where they may be blinding to the pilot and they shall be operated as requested by a pilot.

472. *Wind direction indicator.*

472.1 Wind socks and tetrahedron equipment will be installed and operated as outlined in appendixes VIII and IX, TM 5-823-4.

472.2 Only one wind transmitter (sensor) will be used at each AAF/AHP. All readouts will be derived from the single transmitter.

472.3 Readout values derived from transmitters not located at the landing/takeoff area shall be used as an aid in determining "Estimated wind" conditions; e.g., AAF may have a single wind transmitter located on the roof of an elevated mobile control tower. The control tower operator should determine "Estimated wind" after comparing readout values from the transmitter, wind sock indications, and visual observation of the landing/takeoff area.

472.4 Siting criteria for wind transmitters are contained in TB 95-1.

472.5 Facilities not linked to the single transmitter will request wind direction and velocity from a connected facility.

472.6 Tower controllers shall notify the weather observer whenever the direction of takeoff or landing is changed.

SECTION 500

ATC FACILITY TRAINING PROGRAM

510. Purpose

The Army ATC Facility Training Program (FTP) provides for standardization and guidance in the conduct of facility training. The FTP is designed to prepare controllers for a facility rating and to maintain the proficiency of rated controllers who perform ATC duties in a facility.

520. Scope

This FTP is designed for use by all components of the Army and is provided in three categories.

521. Qualification training. The facility training provided an individual preparatory to being facility rated. This training is mandatory for all newly assigned ATC personnel. Time limitations for this training are outlined in AR 95-37.

522. Proficiency training. An ongoing training program for controllers who are facility rated at that facility. Proficiency training is provided solely to refresh controllers in procedures or briefings of new procedures, etc. This type of training includes, but is not limited to—

522.1 Semiannual written test and controller evaluation.

522.2 Annual weather certification.

522.3 Reviewing changes to local operational procedures.

522.4 Reviewing changes to controller handbooks, appropriate manuals, and regulations.

522.5 Reviewing FAA refresher briefing series.

522.6 Quarterly SCATANA briefings.

523. Remedial training. Training given to controllers who have demonstrated a proficiency weakness while performing assigned duties. Remedial training will be given in the appropriate phase when the controller's level of proficiency indicates improvement is needed.

530. Responsibilities

531. ATC Chief/Facility Chief.

531.1 The ATC Chief/Facility Chief is responsible for establishing an ongoing FTP at his facility and establishing a Facility Training Manual (FTM) IAW para 570 of this manual.

531.2 The ATC Chief/Facility Chief will designate an ATC training supervisor at each facility.

532. ATC training supervisor.

532.1 The ATC training supervisor will conduct

and monitor all phases of the FTP, under the direct supervision of the ATC Chief/Facility Chief.

a. Maintain training records (DA Form 3479-R) on each controller assigned or attached to the facility.

b. Coordinate with other agencies, i.e., weather detachment, operations, crash, etc., and prepare training classes based on locally required training subjects and update material as required.

c. Maintain a training schedule that will include:

(1) Locally required subjects for facility training and proficiency training all controllers.

(2) Training assignments for each ATC trainee controller.

(3) Remedial training for all controllers as needed.

540. The Facility Training Program (FTP)

541. Indoctrination phase. The FTP for newly assigned controllers shall begin with the indoctrination phase. In addition to a briefing on the entire FTM and a comprehensive review of FTM chap 1, it will include an airfield facilities tour and, where possible, a local orientation flight. This phase will culminate with a written examination on FTM chap 1, verification of a valid Class II physical, and assignment to a shift. A current Class II physical is required to enter the next phase of training.

542. Primary knowledge phase. This will consist of classroom training on the appropriate sections of chapters 2, 3, and 4 of the FTM, and will culminate with a written examination.

543. Controller position training phase.

543.1 The shift supervisor will assign and monitor the controller trainee in each position in the facility and assist him with study assignments designated by the training supervisor in the Progress and Certification Record. As the trainee completes each item in an assigned part of the Progress and Certification Record, he will be given a written/oral examination. When it is determined that the controller trainee is proficient in that item, the training supervisor will initial and date the applicable item.

543.2 The training supervisor will administer a written/practical test on each part of the Progress and Certification Record as it is completed and shall enter the results in section VI or VII, as applicable, of the controller's DA Form 3479-R.

543.3 In addition, the training supervisor shall designate applicable study assignments for the trainee from appropriate chapters 5 through 12 of the FTM as they apply to the position training phase. These study assignments, along with other training assignments, will be entered in section V of the controller's DA Form 3479-R and initialed by the training supervisor when completed.

544. *Position qualification phase.* When an operational section of the Progress and Certification Record has been completed, the shift supervisor will administer a Controller Evaluation test using DA Form 3479-1-R. If results are satisfactory, the shift supervisor will notify the training supervisor that the trainee has sufficient working knowledge of that operating position and is prepared to take a controller evaluation to be given by the training supervisor for position qualification. In addition to the controller evaluation, the training supervisor may give a written or oral test for that operating position. When the training supervisor deems the trainee is position qualified, this will be entered in section VI, DA Form 3479-R. In addition, controller evaluations will be given by the shift supervisor as outlined in local policy but not less than once during each 2-week duty period. The results of the evaluation will be entered in section VII of the trainee controller's DA Form 3479-R.

545. *Facility rating.* The controller trainee will be scheduled for an FAA facility rating examination when—

545.1 The trainee has successfully completed a facility examination on each chapter of the FTM and each part of the Progress and Certification Record.

545.2 The trainee has been position qualified for each operating position in the facility.

545.3 The trainee has successfully completed a pre-FAA facility rating examination administered by the training supervisor (oral or written).

546. *Time limitations.* Time limitations for qualification training will be tailored to individual progression rate and needs of the facility; however, maximum time allowed will not exceed those time limitations outlined in AR 95-37.

550. Facility Training Records and Forms

551. *General.*

551.1 The following training records and forms shall be used in the FTP to provide a record of training received and a comprehensive progress report on each controller.

552. *DA Form 3479-R, Air Traffic Control Training and Proficiency Record (fig 5-1).*

552.1 Facility Chiefs/training supervisors shall maintain a complete and current DA Form 3479-R for each assigned/attached military or civilian controller. DA Form 3479 shall be locally reproduced on 8 x 10½ inch paper (image size 6½ x 8½ inches).

552.2 ATC students attending the U.S. Army Air Traffic Control School, Ft Rucker, Alabama, shall receive their training record after successful completion of the Federal Aviation Administration (FAA) CTO examination.

TRAINING AND PROFICIENCY RECORD - AIR TRAFFIC CONTROLLER

For use of this form, see FM 1-200; the proponent agency is US Army Communications Command.

GENERAL INFORMATION

This form consists of Sections I through IX. It will be used as an authoritative source of information and reference in regard to the individual's training record as air traffic controller in the United States Army and as a comprehensive training progress report. Required entries within this form, will be recorded by the facility chief or the training supervisor/officer.

SECTION I - PERSONAL IDENTIFYING DATA

NAME (Last, name, first, middle initial)	ASGD INIT (Pencil)	RANK (Pencil)	SOC SEC NUMBER	PMOS	DMOS (Pencil)	CTO NO.
DATE OF FLIGHT PHYSICAL (Pencil)			EXPIRATION TERM OF SERVICE (Pencil)			

SECTION II-AIR TRAFFIC CONTROLLER SCHOOLS ATTENDED

[illegible]

If additional space is needed for Section II, continue on plain paper. See Section III, page 2.

DA FORM 3479-R, 1 Jan 76

Edition of 1 Nov 72 is obsolete.

Figure 5-1.

[illegible]

[illegible]

If additional space is needed for Section V, continue on plain paper. See Section VI, page 5.

[illegible]

SECTION VIII INDIVIDUAL RADAR RECORD								
YEAR 19 ____	PAR		ASR			MONITOR		TOTAL
	FINAL	EMERG NO GYRO	PATTERN	FINAL	EMERG NO GYRO	ARRIVAL	DEPART- TURE	
JANUARY								
FEBRUARY								
MARCH								
APRIL								
MAY								
JUNE								
JULY								
AUGUST								
SEPTEMBER								
OCTOBER								
NOVEMBER								
DECEMBER								
TOTAL RUNS FOR CURRENT YEAR								
TOTAL RUNS								
FACILITY CHIEF SIGNATURE, _____				DATE _____		CONTROLLER SIGNATURE, _____		DATE _____
See Section IX, page 8.								

SECTION IX- MISCELLANEOUS GENERAL COMMENTS	
1	
2	
3	
4	
5	
6	
7	

DA FORM 3479-R, 1 Jan 76

Figure 5-1—Continued.

552.3 The DA Form 3479-R will not be closed out until a controller is reassigned. When a controller is reassigned, each section of the form (with the exception of section I, General Information, and section II, Air Traffic Controller Schools Attended) will be closed out by entering the date cleared by the Facility Chief, or other appropriate authority, as indicated by signature on the next open line of each section.

552.4 Each air traffic controller shall hand-carry DA Form 3479-R to his new assignment and will present it to the gaining ATC Chief/Facility Chief upon initial interview. The Facility Chief/training supervisor shall reopen the training record by completing the next open line in section III, Initial Interview and section III, Initial Interview and section IV, Assignments and Qualifications.

552.5 DA Form 3479-R consists of nine sections designed to serve as a comprehensive training report. These sections and their uses are—

a. Section I. Personal Identifying Data. Self-explanatory.

b. Section II. Air Traffic Control Schools Attended. Enter in this section the name, location, and date of completion of ATC schools, supervisory courses, MOI, NCO, or any MOS development courses attended.

c. Section III. Interview Data. Enter in this section date of interview, reason for interview (initial interview of newly assigned personnel, slow progress in training program, inability to maintain currency requirements, illness of any type requiring consultation with a physician, outstanding performance, aircraft saves, etc.), controllers initials to acknowledge interview and the Facility Chief's/training supervisor's initials.

d. Section IV. Assignments and Qualifications. Enter in this section the name and location of the facility to which assigned; the actual duties performed (controller, training supervisor, shift supervisor, etc.) from—date assigned—to—date departed; and any certificates awarded incidental to ATC duties (include date awarded and any remarks necessary).

e. Section V. Qualification, Proficiency, and Remedial Training Record. Enter in this section subject of instruction presented; the appropriate code letter (Q—Qualification, P—Proficiency, and R—Remedial); date training scheduled/administered and total hours of instruction given, instructor's signature. Proposed training may be entered as it is scheduled (subject, type, and proposed date) then signed off by the instructor/training supervisor when the training has

been completed. The date shall be entered in pencil until training is completed, then entered in pen or typed.

f. Section VI. Written Test Action. Enter in this section subject being tested; date test administered; score or rating achieved; and any pertinent remarks. All written tests will be retained with the DA Form 3479-R until the trainee is facility rated. Thereafter, the semiannual and any proficiency tests given will be kept on file for one year.

g. Section VII. Proficiency Checks. Enter in this section the operating position in which the check is conducted, date check is conducted, score or rating achieved, number of hours expended on proficiency check; controller's initials to acknowledge proficiency check debriefing; instructor's initials; and any necessary remarks. DA Form 3479-1-R, Controller Evaluation (fig 5-2) will be used to record proficiency checks. All trainee controller evaluations will be kept on file with the DA Form 3479-R until the controller is facility rated. Thereafter; controller evaluations for proficiency or remedial action will be kept on file for one year.

h. Section VIII. Individual Radar Record. Enter in this section the monthly count of radar approaches/operations conducted by the controller. Indicate type of approach/operation in appropriate column. When IFR approaches/operations are simulated, the count shall be prefixed with an S; i.e., S-5, etc. If a facility rated controller is counting a trainee controller's approaches, IAW para 234.2c(3), the count shall be prefixed with a T; i.e., T-5, etc. This section of the DA Form 3479-R shall be closed out the last day of each calendar year by entering the yearly total, the total to date (total of all previous year's approaches), and signed by the controller and Facility Chief/training supervisor.

i. Section IX. Miscellaneous General Comments. Enter in this section any additional information from interview data or comments which may have a bearing on the individual's training record.

552.6 The DA Form 3479-R shall be attached to left foldout side of a manila folder.

553. DA Form 3479-1-R, Controller Evaluation.

553.1 Preparation of DA Form 3479-1-R is self-explanatory and shall be used to record controller proficiency checks of all controller positions of operation and shall be kept attached to the right foldout part of the manila folder on top of all written tests. DA Form 3479-1R will be reproduced locally on 8 x 10½ inch paper.

CONTROLLER EVALUATION					DATE
For use of this form, see FM 1-200; the proponent agency is US Army Communications Command					
TRAINEE INFORMATION					
NAME			GRADE	SSAN	EVALUATION NO.
TYPE TRAINING			POSITION EVALUATED		
KNOWLEDGE					
ITEM	EXCEL	SAT	UNSAT	REMARKS	
AREA					
EQUIPMENT					
CONTROL INFORMATION					
TECHNIQUE					
DECISIONS					
PROCEDURES					
COORDINATION					
JUDGEMENT					
PHRASEOLOGY					
VOICE QUALITY					
☐ EXCELLENT ☐ SATISFACTORY ☐ UNSATISFACTORY		☐ FAST ☐ SLOW ☐ LOUD		☐ SOFT ☐ HESITANT ☐ SING SONG	
☐ HAD TO REPEAT FREQUENTLY ☐ SPOKE BEFORE KEYING MIKE					
SELF CONFIDENCE					
☐ SOUND AND SURE ☐ GOOD-SURE MOST OF THE TIME		☐ FAIR-SOME HESITANCY ☐ HESITANT AND UNSURE		☐ OVERCONFIDENT TENDENCY ☐ OVER REACHING RESPONSIBILITIES	
TRAINER COMMENTS					
OVERALL RATING	ATTITUDE	EMOTIONAL STABILITY	TRAFFIC CONDITION		
☐ SATISFACTORY ☐ UNSATISFACTORY	☐ EXCELLENT ☐ RECEPTIVE ☐ UNRECEPTIVE	☐ EXCELLENT ☐ SATISFACTORY ☐ UNSATISFACTORY ☐ NERVOUS	☐ INSUFFICIENT ☐ LIGHT ☐ MODERATE ☐ HEAVY		
			☐ OCCASIONALLY LIGHT ☐ OCCASIONALLY HEAVY		
TYPED/PRINTED NAME & GRADE			SIGNATURE		

DA FORM 3479-1R, 1 Jan 76

Figure 5-2. DA Form (Controller Evaluation).

Figure 5-2. DA Form (Controller Evaluation).

TRAINEE COMMENTS			DATE			
THE UNDERSIGNED ☐ AGREES ☐ DISAGREES (If you disagree with evaluation, refer to specific items of contention in your comments.)						
TYPED/PRINTED NAME, GRADE & SSAN			SIGNATURE			
REVIEWING AUTHORITY				DATE		
COMMENTS						
TYPED/PRINTED NAME, GRADE & TITLE			SIGNATURE			
I certify that I have read the comments of the Reviewing Authority on the date indicated.			TRAINEE		TRAINER	
			INITIALS	DATE	INITIALS	DATE

DA FORM 3479-1R, 1 Jan 76

2

Figure 5-2. DA Form (Controller Evaluation).

Figure 5-2—Continued.

554. *DA Form 3479-2-R. Progress and Certification Record for Control Tower (fig 5-3).*

554.1 DA Form 3479-2-R shall be used as an FTP within air traffic control towers as outlined in paragraph 540, and will be completed by the shift/training supervisor as the trainee controller progresses through the training program. DA Form 3479-2R will be reproduced locally on 8 x 10½ inch paper.

554.2 When completed, DA Form 3479-2-R shall be attached to the left side of the manila folder, under DA Form 3479-R.

555. *DA Form 3479-3-R, Progress and Certification Record for Terminal Radar (fig 5-4).*

555.1 DA Form 3479-3-R shall be used as a Facility Training Program within terminal radar facilities as outlined in para 540, and will be completed by the shift/training supervisor and main-

tained as prescribed for DA Form 3479-2-R. DA Form 3479-3R will be reproduced locally on 8 x 10½ inch paper.

560. *Maintenance of Controller Training/Proficiency Record Files (DA Form)*

561. *Systems managers.*

561.1 Commander, USACC

561.2 Commander, USAATCA

561.3 ATC Chief/Facility Chief with custody of record; or unit custodian.

562. *Preparation and maintenance DA Form 3479-R.*

562.1 All Army ATC facilities at fixed AAF/AHP and in other Army aviation units having air traffic control personnel shall maintain DA Form 3479-R on assigned or attached ATC Specialists, military or civilian, in the following manner:

PROGRESS AND CERTIFICATION RECORD

FOR

CONTROL TOWER

For use of this form, see FM 1-200; the proponent agency is US Army Communications Command.

THIS PROGRESS AND CERTIFICATION RECORD CONTAINS THE KNOWLEDGE AND TASKS NORMALLY REQUIRED TO PERFORM AT THE FLIGHT DATA, GROUND CONTROL, LOCAL CONTROL AND NON-RADAR APPROACH CONTROL POSITIONS. PART I AND II ARE COMMON TO ALL POSITIONS. PARTS III, IV, V AND VI ARE DIVIDED FOR EACH OPERATING POSITION. THE FACILITY CHIEF MAY ADD TO, DELETE FROM OR MODIFY THIS RECORD TO SATISFY LOCAL REQUIREMENTS.

TRAINEE		
NAME	GRADE	SSAN

DA FORM 3479-2R, 1 Jan 76

PART I—CONTROL TOWER EQUIPMENT				
KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
Describe the type equipment available and the operational characteristics of each.				
1. Radio/Landline Communications Systems.				
2. Weather Equipment.				
a. Weather receiving equipment.				
b. Wind indicators.				
c. Altimeter setting indicator.				
d. Runway visual range equipment.				
3. Recorders				
4. Airfield Lighting Systems.				
5. NAVAIDS Monitors.				
6. Automatic Terminal Information Service (ATIS).				
7. Light Guns and Other Visual Signaling Devices.				
8. Clocks.				
9. Emergency Power Equipment.				
10. Emergency Egress Systems.				
11. Evacuation Alarms.				
12. Local Grid Maps.				

DA FORM 3479-2R, 1 Jan 76

2

Figure 5-3—Continued

PART II—OPERATIONAL AREA KNOWLEDGE				
NOTE: The operational area is the area designated as the facility's control area, unless a greater distance is specified by the facility chief.				
	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
1. Describe Airport.				
a. Field elevation.				
b. Runways/Helipads, and other landing areas (identity, length, and width).				
c. Taxiways (identity and width).				
d. Ramps.				
(1) Parking.				
(2) Refueling.				
(3) Runup.				
e. Location of visual and radio blind spots.				
f. ILS critical areas.				
g. VOR receiver checkpoints.				
2. Describe Airport Traffic Patterns.				
3. Describe Special ATC Airport Procedures.				
4. Describe Local Aircraft Channelization.				
5. Know the Bearing, Distance, Frequency/Channel and Identification of the following NAVAIDS/Fixes.				
a. VOR/VORTAC/TACAN/NDB.				
b. ILS.				
c. Fixes.				
(1) VFR reporting points.				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
(2) Approach gates.				
(3) Final approach fixes.				
(4) Release points.				
(5) Holding points.				
6. Describe.				
a. Control zone dimensions.				
b. Airport traffic area.				
c. Airways.				
d. Location of all airports, including ATC facilities available.				
e. Restricted airspace.				
f. DF net control station location.				
7. Describe.				
a. SID's.				
b. All instrument approach procedures published for your airport.				

DA FORM 3479-2R, 1 Jan 76

4

Figure 5-3—Continued.

PART III - PERFORMANCE OF FLIGHT DATA TASKS				
KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
Demonstrate the knowledge and ability required for the following:				
1. Tape Recorders.				
a. Change, mark, and file tapes.				
b. Playback.				
c. Quality checks.				
d. Remote monitors.				
e. Failsafe.				
2. Flight Progress Strips.				
a. Inbound.				
(1) Format.				
(2) Marking.				
b. Outbound.				
(1) Format.				
(2) Marking.				
3. Logs, Forms, and Records.				
4. Clocks/Time Checks.				
5. Interphone System.				
6. Intercom.				
7. Telephones.				
8. Console Equipment.				
9. DF Net/Coordination.				
10. SID's.				
11. Copy, Relay, and Priority of:				
a. Clearances.				
b. Weather data.				
c. NOTAMS.				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
d. Request for information from non-ATC agencies.				
12. Special Procedures.				
a. Crash procedures.				
b. Alerting agencies for lost or overdue aircraft.				
c. VIP's				
d. Dangerous cargo.				
e. Med-Evacs.				
13. Maintenance Personnel Notification.				
14. Runway Procedures.				
a. Selection/Changing Runway in use.				
b. Opening/closing.				
15. Facility Reference/Information Files.				
a. Letters of Agreement.				
b. Operations Letters.				
c. Facility memoranda.				
d. FLIPS.				
e. Others.				

PART IV - PERFORMANCE OF GROUND CONTROL TASKS				
KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
1. Flight Progress Strips.				
a. Format.				
b. Markings.				
2. Logs, Forms, and Records.				
3. Phraseology.				
4. NAVAIDS Monitoring.				
5. Control of Taxiing Aircraft.				
a. Movement area.				
b. Preferred taxi routes.				
c. ILS critical area.				
d. Traffic Flow.				
e. Control transfer.				
f. Local procedures/restrictions.				
g. Continual surveillance.				
6. Special Procedures.				
a. ATIS.				
b. Dangerous cargo.				
c. Hijack.				
d. Bomb threat.				
e. Base disaster exercise.				
f. External stores/fuel dump areas.				
g. Scramble, recovery, or other tactical procedures.				
h. Aircraft priorities.				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
i. Intersection departures.				
j. IFF/SIF/mode/ code assignments.				
k. Crash phone.				
l. Evacuation of facilities.				
m. Coordination.				
n. Flight inspection.				
o. Exceptions to standard procedures.				
p. Local aircraft characteristics.				
7. Advisories.				
a. Traffic.				
b. Obstructions/field conditions.				
c. NOTAMS/NAVAIDS outages.				
d. Weather.				
(1) Limited observations.				
(2) Warnings.				
(3) RVR/RVV.				
8. Clearance Delivery.				
a. Ramp/gate/hold.				
b. Local requirements.				
9. Vehicle Control.				
a. Emergency.				
b. Others.				
10. Facility Information/Reference Files.				
a. Letters of Agreement.				
b. Operations Letters.				
c. Facility memoranda.				
d. FLIPS.				
e. Others.				

PART V - PERFORMANCE OF LOCAL CONTROL TASKS				
KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
Demonstrate the Knowledge and Ability Required of the Following:				
1. Flight Progress Strips.				
a. Format.				
b. Marking.				
2. Logs, Forms, and Records.				
3. Phraseology.				
4. Runway Procedures.				
a. Selection/changing runway in use.				
b. Opening/closing.				
c. Notification procedures.				
d. Overrun information.				
5. Coordination.				
a. Other ATC facilities.				
b. Ground control.				
c. Flight data.				
d. Other.				
6. Advisories.				
a. Traffic.				
b. Obstructions.				
c. Wheels Check.				
d. Communications transfer.				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
e. Divert.				
f. NOTAMS/NAVAIDS outages.				
g. Weather				
(1) Limited observations.				
(2) Warnings.				
(3) RVR/RVV.				
7. Separation/Sequencing Standards for IFR/VFR Traffic.				
a. Arrivals.				
b. Departures.				
c. Overflights.				
d. Reduced runway.				
e. Special VFR/IFR.				
f. Closed traffic.				
8. Approaches.				
a. Visual.				
b. Contact.				
c. Radar.				
d. Non-radar.				
e. Circling.				
f. Simultaneous same direction.				
g. To parallel/intersection runways.				
h. Simultaneous opposite direction.				

DA FORM 3479-2R, 1 Jan 76

10

Figure 5-3—Continued.

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
9. Missed Approach Procedures.				
a. VFR/IFR.				
b. Radar.				
10. Special Procedures.				
a. Dangerous cargo.				
b. Hijack.				
c. Bomb threats.				
d. Base disaster exercises.				
e. Flight inspection.				
f. External storps/fuel dump areas.				
g. Scramble, recovery, or other tactical procedures.				
h. Preventive control.				
i. Unusual maneuvers.				
j. IFF/SIF mode/code assignments.				
k. Intersection departures.				
l. Local aircraft characteristics.				
m. Exceptions to standard procedures.				
11. Emergency Procedures.				
a. Alerting emergency equipment.				
b. Coordination.				
12. NAVAIDS monitoring.				
13. Airfield Lighting Control.				
14. Facility Information Reference Files.				
a. Letters of Agreement.				
b. Operations Letters.				
c. Facility memoranda.				
d. FLIPS.				
e. Others.				

PART VI — PERFORMANCE OF NON-RADAR APPROACH CONTROL TASKS				
KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
Demonstrate the Knowledge and Ability Required for the Following:				
1. Flight Progress Strips.				
a. Format.				
b. Marking.				
2. Log, Forms, and Records.				
3. Phraseology.				
4. Approach Control Procedures.				
a. Control transfer.				
b. Missed approaches.				
c. Timed approaches.				
d. Aircraft priority.				
e. Copy/relay/issue ATC clearances.				
f. Special VFR/IFR.				
g. EAC/EFC/holding.				
5. Approaches.				
a. Radar.				
b. Instrument (non-radar)				
c. Circling.				
d. Visual.				
e. Contact.				
f. Simultaneous same direction.				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
g. Simultaneous opposite direction.				
h. To parallel runways/intersecting runway.				
6. Special Procedures.				
a. Dangerous cargo.				
b. Base disaster exercise.				
c. Flight inspection.				
d. External stores/fuel dump areas.				
e. Scramble/recovery or other tactical procedures.				
f. Unusual maneuvers.				
g. Minimum/emergency fuel aircraft.				
h. Nordo aircraft.				
i. Alerting emergency equipment.				
j. Alerting agencies for lost or overdue aircraft.				
k. Evacuation of facilities.				
l. NAVAIDS monitoring.				
m. Coordination.				
n. Avoidance of restricted airspace.				
o. Exceptions to standard procedures.				
p. Maintenance personnel notification.				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
q. Effect of field lighting on published minima.				
r. Hijack.				
s. Bomb threat.				
7. Advisories.				
a. Traffic.				
b. Obstructions/field conditions.				
c. Wheels check.				
d. Weather changes.				
e. Overrun information.				
f. NOTAMS/NAVAIDS outages.				
g. Divert.				
h. Birds.				
8. Runway Procedures.				
a. Selection/changing of runway.				
b. Opening/closing.				
9. Facility Reference/Information Files.				
a. Letters of Agreement.				
b. Operations Letters.				
c. Facility Memoranda.				
d. FLIPS.				
e. Others.				

PROGRESS AND CERTIFICATION RECORD

FOR

TERMINAL RADAR

(ARAC)

(GCA)

For use of this form, see FM 1-200; the proponent agency is US Army Communications Command.

THIS PROGRESS AND CERTIFICATION RECORD CONTAINS THE KNOWLEDGE AND TASKS NORMALLY REQUIRED TO PERFORM AT THE FLIGHT DATA ARRIVAL / DEPARTURE AND RADAR FINAL CONTROL POSITIONS., PART I AND II ARE COMMON TO ALL POSITIONS, PARTS III, IV AND V ARE DIVIDED FOR EACH OPERATING POSITION. THE FACILITY CHIEF MAY ADD TO, DELETE FROM OR MODIFY THIS RECORD TO SATISFY LOCAL REQUIREMENTS.

TRAINEE		
NAME	GRADE	SSAN

DA FORM 3479-3R, 1 Jan 76

PART I - TERMINAL RADAR EQUIPMENT				
KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
Describe the type equipment available and the operational characteristics of the following:				
1. Radar (include search, precision, and secondary systems).				
a. Characteristics.				
(1) Coverage (include blind areas/limitations).				
(2) Ranges.				
(3) Video mapping/overlays.				
(4) Cursors.				
(5) Angle marks.				
(6) Reflectors.				
(7) ECM - ECCM.				
b. Alignment/Adjustment Procedures.				
(1) Controls/features used.				
(2) Required/desired displays.				
(3) Accuracy.				
(4) Local requirements.				
c. Special Circuits/Devices (FTC, STC, and/or Other Circuits/Devices Used by Your Facility).				
2. Radio/Landline Communication Systems (include blind areas, frequencies, and circuits available).				
3. Weather Equipment.				

DA FORM 3479-3R, 1 Jan 76

2

Figure 5-4—Continued.

PART II - OPERATIONAL KNOWLEDGE				
NOTE: The operational area is the facility's designated control area/airspace unless a greater distance is specified by the facility chief.				
KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
1. Know the bearing, distance, frequencies/channel, and identification of the following NAVAIDS/Fixes:				
a. VOR/VORTAC/TACAN/NDB.				
b. ILS.				
c. Fixes.				
(1) Approach gates.				
(2) Release points.				
(3) Radar handoff points.				
(4) VFR holding and reporting points.				
2. Describe:				
a. Airways (include intersections & MEA).				
b. Control area or designated airspace.				
c. Airport traffic area.				
d. Location of all airports in the control zone, including ATC facility.				
e. Published holding patterns.				
f. Restricted airspace.				
g. DF net control station location.				
3. Describe each airport under your control jurisdiction as follows:				
a. Runways (include identity, length, width, and overrun information).				
b. Field elevation.				

DA FORM 8479-3R, 1 Jan 76

4

Figure 5-4—Continued.

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
c. Location and type of field lighting systems.				
d. Position of radar reflectors required for radar operations to your airport.				
e. Traffic patterns (VFR & IFR).				
4. Standard instrument departures (SID's).				
5. Describe all instrument approach procedures published for airports within your control area or designated airspace.				
6. Minimum vectoring altitude chart used by your facility.				
7. Local aircraft channelization.				

PART III - PERFORMANCE OF FLIGHT DATA TASKS				
KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
Demonstrate the knowledge/ability required for the following:				
1. Tape Recorders.				
a. Change, mark, and file.				
b. Playback procedures.				
c. Quality checks.				
d. Remote monitors.				
e. Failsafe circuits.				
2. Flight Progress Strips.				
a. Inbound.				
(1) Format.				
(2) Markings.				
b. Outbound.				
(1) Format.				
(2) Markings.				
3. Logs, Forms, and Records.				
4. Clocks/Time Checks.				
5. Phraseology.				
6. Interphone, Intercom & Telephone Systems.				
7. DF Net Coordination.				
8. Standard Instrument Departures (SID's).				
9. Copy, Relay, and Priority of:				
a. Clearances.				

DA FORM 3479-3R, 1 Jan 76

6

Figure 5-4—Continued.

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
b. Weather data.				
c. NOTAMS.				
d. Field condition information.				
e. Divert advisories.				
f. Request for information from non-ATC agencies.				
10. Special Operating Procedures.				
a. Handoffs/control transfers.				
b. Aircraft priorities.				
c. Dangerous cargo.				
d. Base disaster exercises.				
e. Flight inspections.				
f. External stores/fuel dump areas.				
g. Scramble, recovery, or other tactical procedures.				
h. IFF/SIF mode/code assignments.				
i. Minimum/emergency fuel aircraft.				
j. Nordo/receiver only aircraft.				
k. Alerting emergency equipment.				
l. Alerting agencies for lost or overdue aircraft.				
m. Evacuation of facilities.				
n. NAVAIDS monitoring.				
o. Coordination.				
p. Exceptions to standard procedures.				
q. Notification of maintenance.				

DA FORM 3479-3R, 1 Jan 76

7

Figure 5-4—Continued.

PART IV – PERFORMANCE OF RADAR ARRIVAL / DEPARTURE CONTROL TASKS				
KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
Demonstrate the knowledge and/or ability required for the following:				
1. Radar.				
a. Alignment procedures.				
b. Operators maintenance.				
2. Flight Progress Strips.				
a. Inbound.				
(1) Format.				
(2) Markings.				
b. Outbound.				
(1) Format.				
(2) Markings.				
c. Enroute.				
(1) Format.				
(2) Markings.				
3. Logs, Forms, and Records.				
4. Phraseology.				
5. Separation/Sequencing Standards.				
a. Arrivals.				
b. Departures.				
c. Enroute.				
d. Holding.				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
6. Radar Arrivals/Departure Control Procedures.				
a. Identification.				
b. Lost communications.				
c. Altitude verification.				
d. Handoff/control transfers				
e. Successive approach instructions				
f. Missed Approaches				
g. No-gyro Control				
h. Alternate control procedures when radar fails				
i. Termination of radar service				
j. Multi approach procedures				
k. Aircraft Priorities				
l. Copy, relay and issue of ATC Clearances				
m. Special VFR/IFR				
n. Assistance to VFR aircraft in weather difficulty				
o. Assistance to emergency aircraft				
p. Use of secondary radar for control purposes				
q. Resuming normal navigation				
7. Approaches				
a. Radar				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
b. Instrument (non-radar)				
c. Circling				
d. Visual				
e. Contact				
f. Simultaneous same direction				
g. Simultaneous opposite direction				
h. To parallel/intersecting runways				
8. Special Procedures				
a. Dangerous cargo				
b. Base disaster exercises				
c. Flight inspections				
d. External stores/fuel dump areas				
e. Unusual maneuvers				
f. Scramble, recovery or other tactical procedures				
g. IFF/SIF Mode/Code assignment				
h. Minimum/emergency fuel aircraft				
i. Nordo/receiver only aircraft				
j. Alerting emergency equipment				
k. Alerting agencies for lost or overdue aircraft				
l. Evacuation of facilities				
m. Nav aids monitoring				
n. Coordination				
o. Intercept angles when vector to ILS or PAR final approach course				
p. Exceptions to standard procedures				
q. Notification of maintenance				
r. Effect of field lighting on published minima				
s. Hijack				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
t. Bomb threat.				
9. Advisories.				
a. Traffic.				
b. Obstructions/field conditions.				
c. Wheel checks.				
d. Weather observations.				
e. Weather/chaff.				
f. Runway overrun information.				
g. NOTAMS/NAVAIDS outages.				
h. Radar contact/contact lost.				
i. Divert.				
j. Birds.				
10. Runway Procedures.				
a. Selection/changing runway in use.				
b. Opening/closing.				
11. Facility Reference/Information Files.				
a. Letters of Agreement.				
b. Operations Letters.				
c. Facility Memoranda.				
d. FLIPS.				
e. Others.				

DA FORM 3479-3R, 1 Jan 76

12

Figure 5-4—Continued.

PART V - PERFORMANCE OF RADAR FINAL CONTROL TASKS				
KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
Demonstrate the knowledge and/or ability required for the following:				
1. Radar				
a. Alignment.				
b. Operators maintenance.				
2. Flight Progress Strips.				
a. Format.				
b. Markings.				
3. Logs, Forms, and Records.				
4. Phraseology.				
5. Final Approach Procedures.				
a. Handoffs/control transfers.				
b. Identification.				
c. Lost communications.				
d. Successive approach instructions.				
e. Separation standards.				
f. Course/glidepath information.				
g. Trend information.				
h. Lateral/vertical safety limits.				
i. Missed approaches.				
j. No-gyro control.				
k. Use of surveillance approach.				
l. Use of precision approach.				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
m. Alternate control procedures when radar fails.				
n. Termination of radar service.				
o. Multiple approaches.				
p. Copy, relay, and issue ATC clearances.				
q. Trainee restrictions/phraseology.				
6. Advisories.				
a. Traffic.				
b. Obstructions/field conditions.				
c. Approaching glidepath.				
d. Wheel checks.				
e. Weather changes.				
f. Weather/chaff.				
g. Runway/overrun information.				
h. NOTAMS/NAVAIDS outages.				
i. Radar contact/contact lost.				
j. ASR approach MDAS and PAR approach DHS.				
k. Over approach lights.				
l. Over landing threshold.				
m. Divert.				
n. Communications transfer.				
o. Birds.				
7. Special Procedures.				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
a. Exceptions to standard procedures.				
b. Base disaster exercises.				
c. Flight inspections.				
d. External stores/fuel dump areas.				
e. IFF/SIF mode/code assignment.				
f. Evacuation of facilities.				
g. Scramble, recovery, or other tactical procedures.				
h. Minimum/emergency fuel aircraft.				
i. Receiver only aircraft.				
j. Notification of maintenance.				
k. Alerting emergency equipment.				
l. Coordination.				
m. Effect of field lighting on published minima.				
n. Hijack.				
o. Bomb threat.				
8. Runway Procedures.				
a. Selection/changing runway in use.				
b. Opening/closing.				
9. Facility Information/Reference Files.				
a. Letters of Agreement.				
b. Operations Letters.				
c. Facility memoranda.				
d. FLIPS.				
e. Others.				

DA FORM 3479-3R, 1 Jan 76

15

Figure 5-4—Continued.

562.2 A paper record in a file folder, filed alphabetically by the last name of the controller, shall be maintained in an area that is accessible only to authorized personnel that are properly screened, cleared, or trained.

562.3 These records will be used to record—

- a. Training received.
- b. Physical fitness examinations; i.e., Class II.
- c. Test/examination results.
- d. Performance as it is used to determine proficiency to perform ATC duties.
- e. Grades, ratings, and certifications obtained through training and DA Forms 3479-1-R, 3479-2-R, and 3479-3-R.
- f. Other correspondence related to training and/or ratings.

563. Access.

563.1 Individual—upon request.

563.2 Official—Shall be made available to—

- a. Supervisors; i.e., training/shift supervisor.
- b. Federal Aviation Administration authorities.
- c. Those military examiners who may facility rate the controller for duty.
- d. USACC activity/detachment commanders.
- e. Investigators for aircraft accident and flight violations.

f. Requests from other individuals must be made in person (to the custodian of record) or by written request stating reason for request, intended use of information, name, military or civilian status, SSN, and address to the systems managers.

564. Contest.

564.1 Individuals who wish to contest the contents or appeal entries in DA Form 3479-R shall contact HQ, USACC, Ft Huachuca, AZ 85613, to request rules for such action.

565. Transport of records.

565.1 Upon transfer of an individual, record shall be closed out IAW para 552.3 this manual, and hand-carried by the individual to his next duty assignment.

565.2 Upon arrival at next assignment, DA Form 3479-R shall be delivered to the record custodian IAW para 552.4 of this manual.

566. Retention.

566.1 These records are permanent in nature and shall remain in effect while a controller is on active duty.

566.2 Record(s) shall be given to the controller upon termination of active service or destroyed upon death of a controller.

570. Preparation of the Facility Training Manual (FTM)

571. General.

571.1 The FTM is a locally prepared

publication. The ATC Chief/Facility Chief is responsible for the preparation of the FTM in accordance with AR 95-37. The FTM is to be used as a training manual for the purpose of preparing controllers for a facility rating, remedial training, proficiency training, and a reference source for rated air traffic controllers. The use of maps, charts, photos, or drawings is encouraged to make the material more understandable. The minimum number of FTM copies at a facility is three; one each basic reference file and controller reference file, and one for conducting training. Additional copies may be maintained for individual controller study.

572. Format and subject content for the FTM.

CHAPTER 1

FACILITY INDOCTRINATION

1-1. Mission.

1-2. The ATC facility.

- a. Type.
- b. Location.
- c. Operating hours/reporting times.
- d. Preduty requirements.

(1) Checking bulletin boards (give location of each.)

- (2) Reading file.
- (3) Equipment checks.
- (4) Briefings.

e. Completion of duty requirements.

- (1) Briefings.
- (2) Facility cleanup.

f. Training program and requirements.

- (1) Description of training.
- (2) Type; i.e., classroom, laboratory, etc.
- (3) Written/practical examinations.
- (4) Training time limitations.

g. Reference materials.

- (1) Location.
- (2) Content.
- (3) Use.

1-3. General description of associated facilities.

- a. Type/location.
- b. Eating facilities.
- c. Transportation and parking.
- d. Other.

CHAPTER 2

ATC FACILITY EQUIPMENT

2-1. Radio communications equipment.

a. Transmitters.

- (1) Type.
- (2) Location.

b. Receivers.

- (1) Type.
- (2) Location.

- c. Microphones.
 - (1) Type.
 - (2) Location.
- d. Frequencies—usage of each.
- e. Maintenance and outages.
- f. Standby communications equipment.
- g. Secure voice operation.

2-3. Landline communications equipment.

- a. Interphone system and interphone drop.
 - (1) Type equipment.
 - (2) Location.
 - (3) Use.
 - (4) Circuit identification.
 - (5) Maintenance and outages.
- b. Telephones.
- c. Intercom units.
 - (1) Type.
 - (2) Location.
 - (3) Use.
 - (4) Maintenance and outages.
- d. Tele-autograph/electrowriter.
 - (1) Type.
 - (2) Location.
 - (3) Use.
 - (4) Maintenance.
- e. Flight data electronic printer (FDEP).
 - (1) Type.
 - (2) Location.
 - (3) Use.
 - (4) Maintenance.

2-4. Recording equipment.

- a. Type.
- b. Location.
- c. Positions/frequencies recorded.
- d. Reel change procedures.
- e. Marking and storage procedures.
- f. Playback procedures.
- g. Maintenance and outages.

2-5. Airfield lighting.

- a. Tower cab.
- b. Control panel.
- c. Runway/helipad lights.
- d. Threshold.
- e. Boundary lights.
- f. Approach lights.
- g. Taxiway lights.
- h. Rotating/flashing beacon.
- i. Obstruction lights.
- j. Wind direction indicator.
- k. Runway directional lights.
- l. Spotlight.
- m. Ramp lights.
- n. Other lighting.
- o. Maintenance and outages.

2-6. Monitor equipment.

- a. Equipment monitored.
 - (1) TVOR.
 - (2) ILS.
 - (3) NDB.
- b. Location of monitors.
- c. Maintenance and outages.

2-7. Automatic terminal information service (ATIS).

- a. Use.
- b. Operating procedures.
- c. Message content and sequence.
- d. Maintenance.

2-8. Miscellaneous equipment.

- a. Portable light guns.
 - (1) Location.
 - (2) Operating procedures.
- b. Traffic counters.
 - (1) Use.
 - (2) Location.
- c. Binoculars.
- d. Wind instruments.
 - (1) Use.
 - (2) Location.
- e. Altimeter.
- f. Clocks.
 - (1) Location.
 - (2) Time checks.
- g. First aid kits.
- h. Fire extinguishers.
- i. Fuse boxes.
- j. Heating and cooling equipment.
- k. Emergency power equipment and controls.
- l. Maintenance of above equipment.

CHAPTER 3 POSITIONS OF OPERATION

3-1. Control tower cab.

- a. Flight Data
 - (1) Location.
 - (2) Responsibility.
- b. Ground control.
 - (1) Location.
 - (2) Responsibility.
- c. Local control.
 - (1) Location.
 - (2) Responsibility.
- d. Clearance delivery.
 - (1) Location.
 - (2) Responsibility.
- e. Approach control.
 - (1) Location.
 - (2) Responsibility.
- f. Others as appropriate to facility.
- g. Combined positions.

- 3-2. GCA room.
 - a. Feeder.
 - (1) Location.
 - (2) Responsibility.
 - b. Flight data.
 - (1) Location.
 - (2) Responsibility.
 - c. Final controller.
 - (1) Location.
 - (2) Responsibility.
 - d. Others as appropriate to the facility.

- 3-3. ARAC.
 - a. Flight data.
 - (1) Location.
 - (2) Responsibility.
 - b. Arrival control.
 - (1) Location.
 - (2) Responsibility.
 - c. Departure control.
 - (1) Location.
 - (2) Responsibility.
 - d. Precision approach radar.
 - (1) Location.
 - (2) Responsibility.
 - e. Others as appropriate to the facility.

CHAPTER 4 LOCAL AIRPORT INFORMATION

- 4-1. Airport.
 - a. Agency responsible.
 - b. Airport layout.
 - (1) Runways.
 - (a) Width.
 - (b) Length.
 - (2) Weight restrictions.
 - (3) Preferential runway.
 - (4) Other landing areas.
 - (5) Taxiways.
 - (a) Width.
 - (b) Identification.
 - (6) Ramp area.
 - (a) Hangar locations.
 - (b) Parking areas.
 - (c) Ramp areas.
 - (d) Servicing areas.
 - (e) Services available.
- 4-2. Tower visibility restrictions.
- 4-3. ILS critical area.
- 4-4. Radio blind spots.
- 4-5. Compass rose.
- 4-6. VOR receiver check points.
 - a. Location.
 - b. Heading.
- 4-7. Airport obstructions.
 - a. Bearing.

- b. Height.
 - c. Distance.
- 4-8. Traffic patterns.
 - a. Types.
 - b. Altitudes.
- 4-9. VFR reporting points.
 - a. Bearing.
 - b. Distance.
- 4-10. Local airport rules and regulations.
 - a. Taxi regulations.
 - b. Special terminal ATC procedures and phraseology.
 - (1) Separations.
 - (2) Med evac.
 - (3) VIP.
 - (4) Channelization.
 - (5) Aircraft types and call signs.
 - (6) Other.
 - c. Hazardous cargo and ordinance area.
 - d. Location of emergency equipment.
 - e. Restricted aircraft movement area.
 - f. Airfield security office.
- 4-11. Type of operations and training.
 - a. Scheduled air carriers.
 - b. Nonscheduled operations.
 - c. Military operations.
- 4-12. Weather reporting procedures.
 - a. Responsible agency.
 - b. Visibility check points.
 - (1) Day.
 - (a) Bearing.
 - (b) Distance.
 - (2) Night.
 - (a) Bearing.
 - (b) Distance.
 - c. Nearest weather reporting facilities.
 - d. PIREPS.
 - e. Weather warnings.
 - f. High wind plan.

CHAPTER 5 LOCAL FLYING AREA

- 5-1. Boundaries.
- 5-2. Altitudes.
- 5-3. Airways.
- 5-4. Navigational aids.
 - a. Type.
 - b. Location.
 - c. Identification.
- 5-5. Control zone.
 - a. Dimensions/description.
 - b. Adjacent airports.
 - c. Restricted and prohibited areas.
 - (1) Location/dimensions.

- (2) Fuel dumps.
 - (a) Location.
 - (b) Procedures.
- d. Prominent objects.
 - (1) Bearing.
 - (2) Height.
 - (3) Distances.

CHAPTER 6

LETTERS, PUBLICATIONS, AND FORMS

- 6-1. Letters of Agreement.
 - a. Agencies.
 - b. General content.
 - c. Location.
- 6-2. Operations Letters.
 - a. Agencies.
 - b. General content.
 - c. Location.
- 6-3. Facility Memoranda.
 - a. General content.
 - b. Location.
- 6-4. ATC publications and handbooks.
 - a. Type.
 - b. Location.
- 6-5. Facility operating forms.
 - a. Type.
 - b. Use.
 - c. Location.

CHAPTER 7

FLIGHT PLANS, STRIPS, AND MARKINGS

- 7-1. Flight plans.
 - a. Types.
 - b. When required.
 - c. Local filing.
 - d. In-flight filing.
 - e. Action upon receipt.
 - (1) IFR.
 - (2) VFR.
 - f. Procedures.
 - (1) Forwarding information.
 - (2) IFR to VFR flight plan changes.
- 7-2. Strips.
 - a. Types.
 - b. Location.
 - c. Use of each.
 - d. Markings.

CHAPTER 8

IFR AND COOPERATION PROCEDURES

- 8-1. Approach procedures.
 - a. Initial approach altitudes.
 - b. Holding patterns.

- (1) Location.
- (2) Description.
- c. Procedure turn.
- d. Final approach altitude/heading.
- e. Release points from ARAC.
- f. Missed approach procedures.
- g. Weather minimums.
- 8-2. Departure procedures.
 - a. Routes.
 - (1) SID's.
 - (2) Transitions.
 - b. Altitudes between fixes/intersections.
 - (1) Normal assigned altitudes.
 - (2) Minimum enroute altitudes.
- 8-3. Coordination procedures.
 - a. Inter-position.
 - b. Local facility.
 - c. ARTCC.
 - d. Adjacent airports.
- 8-4. SCATANA procedures (if applicable).
 - a. Purpose.
 - b. Receipt of SCATANA notice.
 - c. Implementation procedures.
 - d. Records.

CHAPTER 9

SECONDARY RADAR

- 9-1. Component parts.
 - a. Interrogator-ground equipment.
 - b. Transponder-airborne equipment.
- 9-2. Presentations.
 - a. Factors.
 - (1) Line of sight.
 - (2) Aircraft altitude.
 - (3) Reflections.
 - (4) Resolution.
 - (5) Ring around.
 - (6) Slant range.
 - b. Interference.
- 9-3. Components function.
 - a. Interrogator.
 - b. Transponder.
 - c. Decoder.
 - d. Interlacing.
 - e. Emergency signal.
 - f. Code assignment.
- 9-4. Types of equipment.
 - a. Mark X IFF.
 - b. Mark X with SIF.
 - c. Mark X with SIF and ISLS.

CHAPTER 10

RADAR PROCEDURES

- 10-1. General.
 - a. Procedures and minima.
 - (1) Controlled airspace within radar range.

- (2) Below MEA altitude.
- (3) Special VFR flights.
- (4) Vectoring.
- (5) Phraseology when issuing headings.
- (6) No-gyro procedures.
- 10-2. Utilization.
 - a. Position information.
 - b. Vectoring aircraft.
 - c. Traffic information.
 - d. Radar navigation.
 - e. Assistance when in distress.
 - f. Information on storm and precipitation areas.
 - g. Conducting precision or surveillance approaches.
 - h. Monitoring instrument approaches.

CHAPTER 11

EMERGENCY EQUIPMENT NOTIFICATION PROCEDURES, INCIDENTS, AND ACCIDENTS

- 11-1. Emergency equipment.
 - a. Ambulance.
 - b. Fire fighting equipment.
 - c. Rescue equipment.
 - (1) Helicopters.
 - (2) Other.
- 11-2. Notification procedures.
 - a. Ambulance.
 - b. Fire fighting equipment.
 - c. Rescue equipment.
- 11-3. Action procedures.
 - a. Controllers.
 - b. Fire fighting personnel and equipment.
 - c. Rescue personnel and equipment.

- 11-4. Incidents and aircraft accidents.
 - a. Types.
 - (1) Accidents.
 - (2) Emergencies.
 - (3) Irregularities.
 - b. Format and recording of incident report.
 - c. Information sources.
 - d. Primary reporting procedures.
- 11-5. Inflight emergencies.
 - a. Notification of emergency equipment.
 - b. Closing of airfield.
 - c. Foaming of runways.
 - d. Reports required.
- 11-6. Operational hazard report.
 - a. Preparation.
 - b. Submission.

CHAPTER 12

FACILITY ADMINISTRATION

- 12-1. Daily.
 - a. Compiling traffic count.
 - b. Recording traffic count.
 - c. Collection of facility forms and records.
 - d. Filing of facility forms and records.
- 12-2. Storing records.
 - a. Labeling.
 - b. Storage area.
 - c. Retention period.
- 12-3. Productivity records and schedules.
- 12-4. Dissemination of sensitive information.
 - a. Aircraft accident/incident.
 - b. Training/personal.

APPENDIX A

REFERENCES

A-1. Army Regulations (AR)

40-501	Standards of Medical Fitness.
95-1	Army Aviation: General Provisions and Flight Regulations.
95-5	Aircraft Accident Prevention, Investigation, and Reporting.
95-9	Terminal Air Navigation and Air Traffic Control Facilities and Procedures.
95-12	Reporting and Investigating Alleged Violations of Flying Regulations.
95-14	Army Aviation Flight Information.
95-21	Security Control of Air Traffic and Air Navigation Aids (SCATANA).
95-24	Army Airfield and Heliport Air Traffic Activity Report.
95-26	Aircraft Firefighting and Rescue.
95-37	Army Air Traffic Controller Certification, Training, Rating, and Awards.
95-50	Airspace Responsibilities and Procedures.
380-5	Department of the Army Supplement to DOD 5200.1-R, DODISPR.
385-40	Accident Reporting and Records.

A-2. Field Manuals (FM)

1-55	Guide for the Operation of Army Airfields.
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A-3. Technical Manuals (TM)

11-2557-25 (95-225)	US Standard Flight Inspection Manual.
11-2557-26 (95-226)	US Standard for Terminal Instrument Procedures (TERP's).
11-2557-28 (95-228)	US Interagency Ground Inspection Manual: Air Traffic Control and Navigation Aid Facilities.
11-5840-281-12	Operator's and Organizational Maintenance Manual: Radar Set AN/TPN-18.
11-5840-293-12	Operator's and Organizational Maintenance Manual: Radar Set AN/FPN-40 (with IFF capability)

A-4. Technical Bulletin (TB)

95-1	US Army Air Traffic Control and NAVAID Facility Standards.
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A-5. Federal Aviation Administration Handbooks (FAAH)

7220.1	Certification and Rating.
7340.1	Contractions Manual
7350.4	Location Identifiers.
7110.8	Terminal Air Traffic Control.
(7110.65: Air Traffic Control; effective 1 Jan 76)	

A-6. Federal Aviation Regulations (FAR)

Parts 65 and 91.

A-7. ICAO Manuals

7910	Location Identifiers (Overseas Areas Only).
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APPENDIX B

FACILITY REFERENCES

B-1. Control Tower

A-1 through A-2

TM 95-225

TM 95-226

TM 95-228

A-4 through A-6

B-2. Ground Controlled Approach (GCA)

A-1 through A-6

B-3. Radar Approach Control (ARAC)

A-1 through A-6

FAA Handbook 7110.9, Enroute Air Traffic Control Handbook
(7110.65: Air Traffic Control; effective 1 Jan 76)

Note: At any location with more than one ATC facility (i.e., tower/ARAC) only one copy of FAAH 7220.1 and FAR Part 65 will be required.

By Order of the Secretary of the Army:

Official:

PAUL T. SMITH
Major General, United States Army
The Adjutant General

FRED C. WEYAND
General, United States Army
Chief of Staff

Distribution:

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